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New Light on the SUN TEMPLE OF KOṆARKA

CHOWKHAMBA PUBLICATION

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THE
JAIKRISHNADAS-KRISHNADAS PRACHYAVIDYA GRANTHAMALA
6

NEW LIGHT
ON THE
SUN TEMPLE OF KONĀRKA

FOUR UNPUBLISHED MANUSCRIPTS
relating to
CONSTRUCTION HISTORY AND RITUAL OF THIS TEMPLE

TRANSLATED INTO ENGLISH AND ANNOTATED
BY

ALICE BONER AND SADĀŚIVA RATH ŚARMĀ
WITH
RAJENDRA PRASĀD DĀS

INTRODUCTION
BY
ALICE BONER

TECHNICAL DRAWINGS BY
SADĀŚIVA RATH ŚARMĀ

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PREFACE

When the ruins of the great temple to the Sun God at Koṇārka re-emerged from the jungle in which they had been buried for about three hundred years, they confronted historians and archaeologists with a formidable challenge. Their grandeur and their uncommon features, nay, their very existence in that lonely region raised problems which, in the absence of any extensive documentation on the origin and history of the temple, defied any easy solution. Explanations had to fall back on the aspect of the ruins, on a few copper-plate grants and inscriptions, on the acceptance and interpretation of local legends, providing the base for various ingenious hypotheses.

It is only in recent years that villages around the temple have yielded important historical evidence in the form of palm-leaf manuscripts providing much first hand knowledge on a number of puzzling questions. These manuscripts were preserved in religious centres and private houses as the heirloom of people whose ancestors had been directly associated with the history of the temple, either in some administrative capacity or as priests for the performance of rituals during the construction and afterwards, as long as the temple was in official worship and use. Two main sources for these manuscripts were the families of the ancient landlords of Rupāṣa Gaḍa and Kilā Bayālisbāti, whose forbears in the 13th Century had been chief administrators and supervisors on the work-site. Their names constantly occur in these documents, which are copies of records kept during the construction of the temple and during the time when the temple was in worship. As mentioned in the colophons of these manuscripts, they are copies of a later date, but their original sources are invariably attested. The copies of the Baya Cakaḍā, the book of Accounts held during the construction of the temple, for instance, are as late as the 19th Century, which shows, that among local people the attachment to this shrine had never been broken.

The practice among possessors of palm-leaf manuscripts in Orissa is to have a fresh copy made about every hundred years, and then to consign the older one to the waters of a river. This usage known as Jalasāyī, meant to prolong the life of a text, obviously also submits it to various hazards at the hands of successive copyists. The intervening period would invariably bring about changes in writing, style and language. A later copyist not conversant with the earlier forms might introduce his own. This may result in various distortions and confusions. Thus copies made of one original text made at various times and places, as has been the case with the texts translated here, may always present considerable variations or even discrepancies.

All the manuscripts presented in this volume in an English translation were discovered in a careful survey conducted by Padmaśrī Paṇḍit Sadāśiva Rath Śarmā of Purī in thirty-two

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villages in the Koṇārka area, which took him the better part of eight years. In this survey he has listed 974 palmleaf manuscripts, of which seven are dealing with the subject of the Koṇārka temple. Three of these, the "Padmatola Kavya," the "Arkakṣetra Mahātmya of the Kapila Saṁhita" and the "Padmakṣetra Mahātmya," being of a purely literary character have not been included in this publication. The other four here presented are factual contemporary sources of information on the Sun Temple of Koṇārka and deal with their subject from different angles. The first, the "Architecture of the Padmakeśara Deula," is a survey report, as one would say to-day, on the architecture of the temple and the surrounding shrines, with detailed descriptions of all their parts and illustrated with exquisite drawings. The second, called "Trikāla Mahāmāyā Arcanā Vidhi" explains the religious significance of the small Mahāgāyatrī temple within the compound, and shows a full design of the original aspect of this shrine, of the yantras on which it was built and of the Devī that occupied the garbhagṛha. The third text, called "Baya Cakaḍā" is a book of accounts and incidentally a detailed chronicle of the building operations of all the temples. The fourth, called "Padmakeśara Deula Karmāṅgi" is a manual of the ritual established in this temple, a ritual that was in all probability followed for over threehundred years. Three of these manuscripts are written in Karaṇi script and in an antiquated form of the Oriya language. Only the "Trikāla Mahāmāyā Arcanā Vidhi" is written in Sanskrit and in Oriya script.

These documents, which contain a large amount of circumstantial evidence on the origin and history of the Koṇārka temple, should be able to remove many doubts, clear certain controversial points and thus dispel various erroneous notions which appear to have gained ground, if one is to judge from publications of recent years : First of all the assumption, that the temple was never finished and given over to worship, and secondly the idea that an edifice of this mangnitude could never have been completed in the short time of less then thirteen years without the employment of slave labour. Incidentally they also throw a vivid light on prominent personalities of their time and rescue from oblivion the names of some of the greatest architects and sculptors whom not only India but the world has known.

Deciphering, translating and interpreting such technical documents in an antiquated script and language obviously presents considerable difficulties. The spelling of words is not always reliable and varies from one copyist to another. Still greater vagaries are met with in the writing of ciphers, which may take several different forms in one and the same manuscript. Furthermore many technical terms employed in these texts are obsolete and confronted the translators with problems for whose elucidation other contemporary texts had to be scrutinized, or explanations obtained from representatives of a still living religious or professional tradition. These explanations are given in notes or in the Appendices at the end of the book, where a Glossary of the specifically Orissan terms is added.

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We wish to express our gratitude to all those persons, who by their kindness, competencc and knowledge have promoted and helped the completion of this work. In the first place we acknowledge our indebtedness to all those who have provided the materials for our studies, the precious palmleaf manuscripts.

To the late Gajāpati Rājā Srī Śrī Vīrakiśore Deva of Purī and to Śrī Sudarśana Taḍau Paṭṭanāyaka, the traditional Custodian of the Mādalā Pañjī, the Chronicle of the Jagannātha Temple in Purī, for permission to study relevant parts of these invaluable records.

To Śrī Jagannātha Sāhu and Śrī Karuṇākara Sahu in Bangurigan for letting us have the illustrated text on the Architecture of the Padmakeśara Temple, the Sun Temple of Koṇārka.

To Śrī Jagannātha Tripāthī in Kurujaṅga and Śrī Vāsudeva Ratha in Balisahi, Purī for providing us the Trikāla Mahāmāyā Arcanā Vidhi, the text on the worship of the Mahāgāyatrī Devī Temple at Koṇārka.

To the late Śrī Jagannātha Dāsa Mahājana of Rupāsa for Ms. No. I of the Baya Cakaḍā and to Mahant Rāmratan Dāsa of the Ayurbaṅga Matha for Ms. No. 2 of the Baya Cakaḍā, the Book of Accounts and Chronicle kept during the building operations of the temple.

To Mahant Ānant Avadhuta of the Avadhuta Maṭha in Koṇārka for letting us have the text on the Temple Ritual, the "Padmakeśara Deula Karmāṅgi," and to Mahant Achyutānanda Dāsa of the Vāmadevapura Maṭha for permission to take a photograph of the beautiful drawing on palm-leaf in his possession, showing the image of Mahābhāskara who was worshipped in the central shrine of this great temple.

To Śrī Dayānidhi Mahāpātra of Gagapura for the drawing of the frontview of the temple and to Swami Gopalatīrtha of Purī for his help in procuring this drawing.

Further we are indebted for valuable information on the technicalities of this work to some of the professional experts in Orissa :

To the late Aparti Mahāpātra of Purī, the late Bābāji Mahārāṇa of Purī, and the late Arta Mahāpātra of Banapada, (Purī), all traditional architects, and also to the late Jagannātha Pradhāna, Kolhasuansia, specialist for scaffoldings for the construction of big temples, further to Fakir Mahārāṇa, the Chief Builder of processional chariots and several others who have been forthcoming with information and advise. Unfortunately the best among these professional architects expired during the years we have been pursuing these studies, and since they

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had no patronage and have no successors, their art is bound to die with them. The best that can be done at this late hour is to carefully retrace all records left by them and to collect them as speedily as possible, in order to preserve their knowledge for future generations.

We also express our warmest thanks to Miss Winifred Lewis, Mrs. Gertrude Sen-Emerson and to Mr. Thomas Burke for having kindly revised parts of our English translation and given helpful suggestions for our Introduction, and to Śrī Ayodhya Dāsa from Orissa for helping in revising the translation of the text on the Architecture of the Sun temple of Koṇārka.

We gratefully acknowledge the co-operation of all those who have allowed us to make use of their photos for this publication, foremost among them being the Archaeological Survey of India with its very fine and exhaustive documentation on the Sun Temple of Koṇārka. The names of all other photographers will be found mentioned in the List of Plates at the end of the book.

Finally we shall always remember with gratitude the keen interest taken by Mr. Mohandas Gupta and Mr. Bitthaldas Gupta, Directors of the Chowkhamba Sanskrit Series of Varanasi and their associates, thanks to whose untiring efforts the publication of this book was made possible.

Paṇḍit Satkari Mukhopadhyaya has greatly facilitated our task by his accurate reading and correcting of proofs and his expert supervision of the block-making for the numerous illustrations.

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INTRODUCTION

1. *EARLIEST EXPLORATION OF THE TEMPLE OF KOṆĀRKA*

The great temple to the Sun God at Koṇārka in Orissa is even today, after the collapse of the main tower and a number of reckless depredations, a conspicuous landmark on the coastline of Orissa. For miles around the pyramidal roof of its majestic porch dominates the flat sky-line of coconut palms and casuarina trees, and in its solitary grandeur this temple ruin still is an eloquent testimony of a glorious and mysterious past.

What a tremendous impact on the imagination of the inhabitants of the surrounding villages and the whole country the erection of this temple must have exerted, may be gauged from the fact that legends about the temple and its builders are still very much alive. Yet the temple was abandoned as a ruin in the jungle more than three centuries ago !

The first visit to the temple ruin by an outsider is recorded in the Mādalā Pāñji, the chronicle of the Jagannātha temple in Purī, in the fascicle (nathi) No. 34 of Vīra Kiśora Mahārāja (1737–1793 A. D.), which contains a personal report of Bābā Brahmacārī, the Guru of Sheo Bhaṭṭa Sāṭhe, Deputy of the Maharāṣṭrian Dynasty then governing Orissa, the Bhoṅslās of Nagpur :

> "I, Bābā Brahmacārī, heard from a reliable person that near the ocean was a ruined temple to the Sun God. Having myself great devotion to the Sun God, I wished to see the temple. For my expenses Chimanji gave me 200 gold coins. With Koṭha-karaṇa Nilāmbara Paṭṭanāyaka and attendants I set out on two elephants on the daśamī day of Phālguna śukla pakṣa in the 12th aṅka* of the Rājā. We travelled along the sea-shore and crossed two rivers. We did not see a single house on the way, so that I started wondering how a temple could have been built in a place without any human habitat or any human being. Suddenly, from a distance of one krośa (2 miles) we perceived a stone hillock, and that was the temple. Having read in the Prācī Māhātmya and in the Padmā Purāṇa about the religious importance of this temple I was very eager to see it. We reached there in the morning of

* The regnal years or aṅkas of Vīra Kiśora Mahārāja started in 1737 A. D., while the Maharaṣṭrian rule began only in 1751 A. D. Sheo Bhaṭṭa Sāṭhe is known to have been in Orissa from 1755–1764 A. D. Chiman Sau, above referred to as Chimanji, was in Orissa only from 1759 A. D. onwards. Therefore the report of the Mādalā Pāñji could not be earlier than 1759 A. D. and this would indicate the 28th aṅka of Vīra Kiśora. Therefore the 12. aṅka must be a writing mistake of the copyist. About the method of calculating regnal years or aṅkas of the Orissan Rājās see Baya Cakaḍā, Leaf No. 1, note.

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the ekādaśī day. Hidden in the jungle the temple appeared small, but on approaching it, I was astounded to see its size, and I wondered how such a large temple could have collapsed. All the stones that were lying about showed beautiful carvings. The compound wall was like those of Mogul forts, but all broken. There were such mountains of sand that one could hardly detect the wall. Koṭhakaraṇa knew this much, that according to the Mādalā Pāñji the wall was more than 12 hasta (cubits) high. First I thought the temple was that in the southern corner (the Ṭhākurāṇī temple), but then I realized that a bigger temple stood by its side. To my great sorrow I learnt that an image of the Devī, which stood in the smaller temple had been carried away by villagers for their own worship. Under such circumstances, what could one do ?

" I called one hundred men from the Golarā and Kaṇiyā villages. With the help of these men I started liberating a very beautiful pillar that emerged by 2 hasta from a heap of stones and was wound around by creepers. When after two days the pillar was cleared, I realized that a pillar of this kind had never been seen in the whole of Bhāratavarṣa. Then we started cutting our way towards the portal of the temple, because I had a great desire to see it. We came across many snakes and godhis (giant lizards). The first thing we saw was an arch with very beautiful carvings, in the middle of which appeared the head of a Sūrya image. At every step we trod upon images. I picked up a black stone with a beautiful figure seated on a deer which appeared to be that of Vāyu's consort. There also I discovered the head portion of a lion. Facing the Aruṇa pillar there were two lions on the ground which I had dug out from the passage. When I reached the broken portal, I looked inside. When looking inside I heard some noises and felt afraid. I saw very long iron beams hanging across and four big pillars standing. I went inside between the pillars towards the garbhagṛha. There were so many stones piled one upon another that one could hardly recognize anything. But on the inner portal, just as on the outer portal, there were very beautiful door-jambs. Near to those I saw some fresh blood. This frightened me and I left the place. But I gave orders to my men to take out the pūjā-image, whose hands and nose were broken. After five days' work they brought out the image. I had had a mind to reconstruct the temple with the help of the Mahārāṣṭrian Rājā, but I understood that it was quite impossible. Seeing its condition I lost hope that the temple could be rebuilt in the same way it was standing on its southern and western side. Therefore I thought that it was better to carry away some of the images. The pillar was placed on three bullock-carts in a row and was carried away, together with the 18 pieces of the pedestal. From the barāṇḍi of the small temple we got the image of a Bābāji, an image of Kṛṣṇa of one and a half cubits, an elephant-procession of one and a half cubits, a Vāyu Patnī, a Narasiṁha Deva and ten other images. After sending all these to Puruṣottama (Purī) I left the place with great pain in my heart. Why, I thought, had not the ocean swallowed all these stones ? From the Karaṇa I heard that one

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Keshomaru, a Hindu, had carried away the dhvaja-padma.* I thought he must have been a Rākṣasa. After returning to Puruṣottama, I kept all these images on the roof of the Bhoga maṇḍapa (of the Jagannātha temple). The image of Rājā Narasiṁha and that of Narasiṁha Deva I kept in the mukhaśālā of the Lakṣmī temple.** The Vāyupatnī and the image of the Bābāji I sent to the Hanumān temple,*** for which I had great devotion. I could not do anything further and that gave me great sorrow. From this report the condition of the temple can be understood."

(signed) on Caitra Trayodaśī :

Bābā Brahmacārī Koṭhakaraṇa Nilāmbara Paṭṭanāyaka

Another report in the Vīra Kiśora Fascicle (nathi) No. 21 of the Mādalā Pāñji gives a few more names of images that Bābā Brahmacārī had taken away to Puruṣottama. They are :

The Ratha siṁhāsana image with hands broken (the Pūjā image, the most important piece)

The Navagraha stone from the southern portal (now above the portal of the wall enclosing the Guṇḍicā temple compound in Purī)

Six Kanyā images in sandstone (two or three still kept in the Guṇḍicā temple in Purī)

A Narasiṁha Deva image from the side of the Sāmbapīṭha (see plan)

One large Mithuna image

One Caturaṅga mūrti (war scene) in chlorite

A still later report on an attempt at unearthing the temple is found in the fascicle (nathi) No. 41 of Rāja Divya Siṁha Deva (1793–1798 A. D.) :

"Rāja Divya Siṁha Deva wanted to unearth the Koṇārka temple and for this purpose gave 2000 mogul taṅkas (silver coins) to Dewan Bhramara Paṭṭanāyaka. He tried for three months, but did not succeed. So he only brought away six female figures two and a helf hasta (cubits) high, an image of a Bābājī and also a head of one of the musicians from the roof of the mukhaśāla The image of the Bābājī he kept in the Hanumān temple and the Sakhi (female) figures in the Guṇḍicā temple.**** One Dāma Mahāraṇā who had gone along with them for the excavation set up the head on a temple in his mohalla (quarter). The Rājā was taken prisoner by the Firiṅgis (British) and this work was stopped." (See Colophon of Ms. No. 2 of the Baya Cakaḍā.)

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* The sacred emblem on top of the temple. This would presumably have happened about 1609 A. D. when the śikhara collapsed, see Intr. para 12

** The latter is still in the Lakṣmī temple at Purī.

*** The image of the Bābājī is still in situ, inserted in the outer wall of the Hanumān temple in Purī.

**** These and the Bābājī may be the same as those mentioned above.

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These were—to our knowledge—the earliest recorded attempts at unravelling the mystery and at salvaging the great temple of Koṇārka which had been swallowed by the jungle and was facing utter destruction. They were written only about one hundred years after the collapse of the great monument and about one hundred years before the chance discovery of its ruins by the British, who then occupied the country.

The only existing description of the temple by an eye-witness who saw it when it was still whole is the often quoted report in the Āin-i-Akbari by Abul Fazl.* He was full of admiration and said: "Even those whose judgement is critical and who are difficult to please stand astonished at its sight." Then he gives a fairly correct description of what he saw, but attributes the creation of the temple to one Rājā Narsingh Deo, whom he supposed to have lived 750 years before his time. This was in about 1580 A. D. (See Pl. Nos. 2 and 6)

When STIRLING visited Koṇārka in 1824 only a small section of the vimāna (temple-tower) about 120 feet in height was still standing, which gave the temple, when seen from a distance the appearance of a ship under sail. The same section was seen by FERGUSSON in 1838, as testified by the drawing published as an engraving in his book *Picturesque Illustrations of the Architecture of Hindustan* (Plate 7a). He also saw the Eastern portal almost intact, as shown—though incorrectly drawn—in an earlier engraving (Asiatic Researches, XV. 1825). The projecting side walls of the portal were still standing with the pillars that supported the arch above it. Also the Navagraha lintel and the sculptures above it were still in situ. In the meantime, however, the pillars which Bābājī Brahmacārī had seen standing in the interior of the mukhaśālā towards the end of the 18th century had apparently tumbled down.

That the artistic excellence of this temple was immediately recognised by its discoverers is attested by the words of FERGUSSON which accompany his drawings: "The temple itself is of the same form as all the Orissan temples and nearly of the same dimensions as the great ones at Bobhaneśvar and Purī,** it surpasses, however, both these in lavish richness of detail, so much so indeed, that perhaps I do not exaggerate when I say that it is, for its size the most richly ornamented building—externally at least—in the whole world." And again: "Taken altogether, this building may be considered as one of the best specimens of Indian architecture as an exterior, though in Upper India there are infinitely finer interiors. There is altogether so much consonance in the parts and appropriateness in the details, that the effect of the whole is particularly charming."

Although from the time of its discovery the temple had been admired as the most glorious single monument of medieval India, for its perfect outline, its harmonious

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* Āin-i-Akbari, Vol. II. translated by Col. H. S. Jarrett, Bibliotheka Indica, Asiatic Society of Bengal, Calcutta 1910.

** The basement was then still buried in the sands and therefore the full height of the temple could not be gauged.

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proportions and the vitality and spirit of its sculptures, and although over a century o research by scholars and archaeologists has now been spent on it, Koṇārka has in many ways remained an enigma up to the present day. Its very existence in such a remote and deserted place has raised innumerable questions and problems :

Why and to what purpose was such an extraordinary monument erected far from any human settlement ? Did a nearby seaport exist at the time of its construction, providing a convenient water-way for the transport of stones from distant quarries ? Or did a prosperous city make possible the enormous expenditure involved in such an undertaking ? If it was the ambition of King Narasiṁha to immortalize his victories by a monument outshining all others in the country, why did he not erect this temple in Biḍānāsī, his own capital rather than in this distant, forsaken place ? Where did he find the brilliant artists who planned such a perfect piece of architecture, and the legion of uncommonly skilled workmen who made its execution possible ? Was it achieved by slave labour, as the pyramids in ancient Egypt are supposed to have been, or by forced recruitment, or by corporations of temple-builders like the cathedrals in medieval Europe ? Where did the enormous blocks of stone come from and how did they reach this sandy desert far from any mountain or stone-quarry ? How was it possible to transport and then lift them to such considerable heights without modern technical contrivances ? How were the enormous iron beams—much longer than the famous iron pillar in Delhi—cast, which supported the ceilings and doorlintels ? Was the temple ever really finished ? Or did it prove too colossal an enterprise for the technical possibilities of those times ? Was it therefore abandoned before being consecrated ? If it was consecrated at all, to which specific cult did it belong ? Had it been a Buddhist sanctuary before becoming a temple of the Sun God ? What was the meaning of the extraordinary number of erotic sculptures on its walls ? Did they have any relationship to the cult and its ritual ? Were the collapse of the temple and its consequent dereliction caused by a natural disaster, such as earthquake, cyclone, lightning or torrential rains ? Or by warfare and human vandalism ? Did it collapse on account of its enormous size, or its faulty construction ? Or perchance by the sinking of the foundations? Or due to the excessive weight of the big lion on the eastern side of the śikhara, which brought down its upper part, as is reported in one entry of the Mādalā Pāñji ?

From the time the British authorities began to take an interest in the study and conservation of the temple, many contradictory hypotheses have been advanced on all these puzzling questions, both by European and by Indian scholars. But owing to the paucity of historical documentation the answers have been mainly guesswork. The vicissitudes that accompanied the discovery, the unearthing and the preservation of the temple have been set forth in Government publications, in journals, art reviews and books. The attitudes of their authors range from superlative praise of the temple's beauty to shocked vilification of its sculptures, on account of their often uninhibited erotic character.

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The most imporrant publications on Koṇārka are the following :

Andrew Stirling Asiatick Researches, XV. p. 332 foll.	1825
James Fergusson, Eastern and Indian Architecture	
James Fergusson, Picturesque Illustrations of the Architecture of Hindustan	1839
W. W. Hunter, Orissa, Vol. I, p. 239 foll.	1872
Rajendralal Mitra, The Antiquities of Orissa,	1880
Bishan Swarup, Koṇārka, the Black Pagoda of Orissa,	1910
M. M. Ganguly, Orissa and her Remains, Calcutta	1912
Kripasindhu Misra, Koṇārka (in Oriya)	1919
R. D. Banerji, History of Orissa) both these Histories of Orissa mainly	1930
N. K. Sahu, A History of Orissa) contain excerpts from earlier writers	1930
Nirmal Kumar Bose, Monograph on Koṇārka (Bangali)	
Nirmal Kumar Bose, Canons of Orissan Architeture, Calcutta	1932
Sudhanshu Chowdhury, Album of photographs from the Koṇārka Temple, with Introduction by O. C. Ganguly and a collection of articles by prominent people from books and magazines, Calcutta	1956
Kanwar Lal, The Miracle of Konārka, Delhi	1967
Percy Brown, Indian Architecture, Buddhist and Hindu periods, Bombay	1959
Rustam J. Mehta, The Sun Temple of Love, Bombay	1968
Marg Publications, Koṇārak, Bombay	1968
Debala Mitra, Koṇārak, Archaeological Survey of India	1968
Eliot Elisofon and Alan Watts, The Temple of Konarak (Erotic Spirituality)	1971

The various attempts that were made for more than a century, from 1806 to 1910, to salvage the dilapidated temple and the repairs which have restored it to its present condition are clearly summarised in the chapter on conservation of the publication by Debala Mitra and hence need not be treated here.

2. *THE SANCTITY OF KOṆĀRKA*

While scholars and archaeologists investigated the temple of Koṇārka from the historical and the technical point of view in order to effect its conservation and restoration, people around Koṇārka, in the rest of Orissa and in neighbouring provinces, quite unaware of the existence of such problems, have never ceased to venerate the temple and the ground on which it stands as a holy place, consecrated to the Sun God from the beginning of time. Although the temple is a ruin, even today thousands of pilgrims flock to Koṇārka every year on the Māgha śukla saptamī, the day of the Spring Festival, to celebrate the new birth of the Sun God. When the Sun has returned on its northern course, they assemble before sunrise to bathe in what remains of the sacred Candrabhāga river and in the nearby sea. When on that day the Sun God emerges from the ocean in the Agni Koṇa, the south eastern corner of the horizon, they adore and worship him with silent prayers or yells of joy, and many in their extasy imagine they actually see him rising from the waters in his luminous chariot

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drawn by seven fiery horses. After that they walk one and a half miles to the temple to circumambulate the shrine and to worship the Navagraha stone which originally was above the eastern portal and is now set up in a small shed outside the compound. When their religious duties are performed, they pass the rest of the day in cooking, eating and merry-making, and by nightfall they have all dispersed on their homeward journey. Some of these people come on foot from distant places and eventually spend a whole month on the road before reaching their destination. This shows how great is their faith and their love for the Sun God, and how strong are latent memories of ancient traditions.

It is well known that the collective memory of so-called backward or illiterate people has deep roots, reaching back to a far more distant past than the memory of modern, scientifically educated man. For such people, living in an ancient tradition, the past is not just a mental recollection, but it is the very life-stream of their inner being, the nourishment on which their soul and spiritual existence depends. The past is for them an eternally living present, which no new experience or knowledge can obliterate. For modern man, the past is a mental reconstruction of facts and events, collected from books and other documents, from the testimony of monuments, sculptures and paintings. It is a detached, objective knowledge, an intellectual apprehension, whose significance may change with every new experience, and therefore need not necessarily have any bearing on the person's actual life. Such objetive knowledge may, scientifically speaking, be more exact, but it no longer contains the flavour and nourishing substance of the concepts incorporated in the legends transmitted by word of mouth and elaborated by the faith of countless generations.

It is only to this deep-rooted collective memory that the spontaneous confluence to Koṇārka of thousands of people from far and near can be ascribed, walking on foot for days on end, reaching the sacred spot for the devotions of a single day, and returning home at the day's end, contented and satisfied with the feeling of having accomplished a sacred and meritorious duty to their God as well as to their ancestors.

Even if it were not confirmed by some entries in the Mādalā Pāñji, to which we shall refer later on, it would be quite safe to assume on the strength of such a persistent tradition that long before Rājā Narasiṁha I built his magnificent monument, a sanctuary for the worship of the Sun God had stood in that place. The very fact that the place was and is still venerated, regardless of the condition of the temple, whether whole or in ruins, would prove that it is more the ground on which the temple stands than the temple itself that is hallowed—consecrated as it was to the Sun God by the presence of the Manus and their temple building in the sacred forest, the tapovana, or by the tapasyā of Sāmba, or by whatever legendary garb the collective memory of the people would cherish.

3. THE SUN GOD IN THE VEDAS, UPANIṢADS AND PURĀṆAS

Sun worship is certainly as ancient as mankind. Adoration of the sun as a divine power, as a God, has immemorial traditions. The vivifying all-pervading power of the Sun, its immense,

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all-embracing lustre, without which no life could be generated or could endure, its rhythmic rising and setting causing the alternation of day and night, the regular shifting of the sunrise from the north to the south and from the south to the north of the horizon, connected with the ever changing and recurring seasons, appeared to early mankind as the immediate and supreme Cause of existence. The Sun had drawn the worlds from chaos, had created Time and had given Order and Rhythm to earthly existence : thus the Sun was the ruler of the universe. Behind the chain of contingent causes, this great power appeared as the ultimate Cause, the supreme Entity, beyond which no scrutiny, no human thinking could reach. Distant yet near, close and intimate, it pulsated in the blood, warmed and expanded the heart, illumined the mind and raised the soul towards a vision transcending all human limitations.

The earliests documents of human history bear witness to the awe and reverence with which the Sun's eternally recurring revolution was regarded, not simply as a natural phenomenon, but as the primary manifestation of a divine power to whom adoration and worship were due. Under many names, Re or Aton, Helios or Apollo-, Phoebus or Mithras, Baldur or Shamash—in all ancient civilizations the Sun God was adored as the great, if not the supreme Creator and Ordainer of existence.

Among the vedic divinities the Sun God also occupies an exalted position. He is invoked in sacrifices and praised in hymns, either as the supreme divinity, or in various different aspects signifying his multiform activities. No attempt can be made here to go into a detailed analysis of such hymns, but a few examples given in R. T. H. Griffith's* translation—may convey a general idea of those aspects that were later on, in the Purāṇas, represented as personified divinities.

The Sun God was addressed under various names denoting his particular character and function : When called Savitṛ (Savitar), he was conceived as the Creator, the Awakener, the Vivifier, the Impeller and Animator of all living beings :

"For thou at first producest for the holy gods the noblest of all portions : Immortality,
Thereafter as a gift to man, O Savitar, thou openest existence, life succeeding life.....(Ṛgveda IV. 54, 2)
Held in the lap of Savitar, divine one, all men, all beings have their place forever.....(Ṛgveda I. 35, 5)
He hath stretched out his arms to all folk on earth, and with his Laws observed rules his own mighty course.....(Ṛgveda IV. 53, 4)
What the fairfingered god brings forth o'er the earth's expanse or in the height of heaven, that work of his stands sure.....(Ṛgveda IV. 54, 4)

When considered as the sole Luminary, the essence of Light, the source of all light, both material and spiritual, he is addressed as Sūrya with such epithets : "This light, the best

* R. T. H. Griffith, "The Hymns of the Rigveda, Translated with a popular commentary, Benares 1920.

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of lights, supreme, all conquering," reminding of the "Sol invictus" applied to the Persian Sun God Mithras and later to the Christ. Or he is described as "radiant as high Truth" or as "Truth based upon the statute that supports the heavens". (Ṛgveda X. 170)

When the Sun God appears as Sustainer, Protector and Nourisher of all life, he is called Pūṣan, the Giver of prosperity and wealth, the divine Herdsman, who leads his cows to opulent pastures. As such he is implored not only for material, but also for spiritual nourishment, as in Ṛgveda I. 138, 3 :

"Thou Pūṣan, in whose friendship they who sing forth praise enjoy advantage,
Even in wisdom, through thy grace, in wisdom even they are advanced.....

Since Pūṣan can never be conceived as a fighting god, but only as a peaceful dispenser of heavenly blessings, he is frequently associated with Indra, his fighting counterpart. Indra kills Vṛtra and thus releases the fecundating waters from heaven, while Pūṣan nourishes living beings with the crops fertilized by these waters.

When adressed as Mitra, the Sun God is the great luminous friend of all mankind. But also here he has a dark, inalienable counterpart in Varuṇa. Together with Varuṇa he forms the couple Mitrā-Varuṇau, the makers of day and night, the Upholders of cosmic Law and Order. They watch over the Rhythm of movement in the universe, but are also the ordainers of human life :

"Guardians of all things fixed, of all that moveth, beholding good and evil acts of mortals.....

These, Aditi's sons, infallible and mighty, have waxen in the home of Law eternal.....

They, ever vigilant, with eyes that close not, caring for Heaven and Earth, lead on the thoughtless..... (Ṛgveda VII. 60, 2, 5, 7)

"Ye are the Charioteers of Law, born in Law, terrible haters of the false..... (Ṛgveda VII. 66, 18)

Their high imperial might may nowhere be assailed, never their Godhead be assailed..... (Ṛgveda I. 136, 1)

Mitrā-Varuṇau stand for the two antagonistic, yet complementary and indivisible powers that rule the universe. Mitrā is the Awakener, the Vivifier, while Varuṇa casts his fetters (pāśa or noose), paralysing and at the same time regenerating vital forces. In later times these functions are incorporated in the peaceful and wrathful aspects of the ruling divinities, in their creative and destructive activities. They cannot be separated, because destruction is always the inevitable prepartion for new creation. But nowhere is their complementary function so unequivocally expressed as in the couple Mitrā-Varuṇau. In the Dhyāna of Mitra in the Sūrya Tantra, which is a later tāntric text, both these functions are however attributed to Mitra alone. (See App. XX.)

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In the Atharva Veda the various aspects of the Sun God are not sung in different hymns, but are often fused into one broad synthesis in one and the same hymn, as for instance in Book XIII, Hymn 2 :

Sūrya hath harnessed to his car to draw him seven stately bay steeds gay with golden housings,
The Bright One started from the distant region, dispelling gloom, the God hath climbed to heavens...
The constellations pass away like thieves departing in the night before the all-beholding Sun...
Dear to all men, facing all directions, with hands and palms on every side extended,
He, the sole God, engendering Earth and Heaven, beareth them with his wings and arms together...
He hath gone up on high, the God's bright presence, the eye of Mitra, Varuṇa and Agni.
The soul of all that moveth not or moveth, Sūrya has filled the earth and air and heaven...
High in the midst of Heaven may we behold thee whom men call Savitar, the bright red eagle,
Soaring aud speeding on the way, refulgent, unwasting light.....

And equally so in Book XIII, Hymn 3 :

He who engendereth these, the Earth and Heaven, who made the world the mantle that he weareth,
In whom abide the six wide-spread regions through which the Bird's keen vision penetrateth.....
He from whom winds blow in ordered seasons, from whom the seas flow forth in all directions,
He who takes life away, he who bestows it, from whom comes breath to every living creature.....
Who with the breath he draws sates earth and heaven, with expiration fills the ocean's belly.....
He who has taken to himself the breathing of the Supreme, the vigour of the Highest.....
On whom rest six expanses and five regions, four waters and three syllables of worship,
He who has looked between both spheres in anger.....
He who consuming food, becomes its master, the Lord of prayer, the Regent of devotion,
The world's Lord, present and to be hereafter.....

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At evening he is Varuṇa and Agni, ascending in the morning he is Mitra,
As Savitar he moves through airs mid-region, as Indra warms the Heaven from the center,
This golden-hued Haṁsa's wings, soaring to Heaven, spread over a thousand days' continued journey,
Supporting all the gods upon his bosom, he goes his way, beholding every creature.
This is the god who dwells within the waters, the thousand-rooted, many-powered Atri,
He who brought all these worlds into existence.....

In Book XIII, Hymn 4, Sūrya is identified with still other gods, such as Vāyu, Rudra, Mahādeva, Aryaman, Varuṇa, Agni and Mahāyama, the god of Death, his dark side, corresponding to Varuṇa :

"This conquering might hath entered him, He is the sole, the simple One, the One alone,
In him these deities become simple and One.....
To him who knoweth this God as simple and One.....
He verily is Death, he is Immortality, he is the Monster, he is the Fiend,
He is Rudra, winner of wealth in the giving of wealth, in uttering homage he is the sacrificial exclamation Vaṣaṭ duly employed.....
All constellations yonder with the Moon are subject to his will.
He was brought forth from Day, and Day derives its origin from him.
He was brought forth from Night, and Night, derives her origin from him,
He was produced from Air, and Air derives its origin from him,
He was produced from Wind and Wind derives its origin from him,
From Heaven was he produced, and Heaven derives his origin from him,
He sprang from regions of the Sky, from him the heavenly regions sprang,
He is the offspring of the Earth, Earth hath her origin from him,
He was produced from Fire, and Fire hath its origim from him,
He is the Waters' offspring, and from him the Waters were produced,
From holy verses was he born, from him the holy verses sprang,
He is the son of Sacrifice and Sacrifice was born from him,
Sacrifice, Sacrifice's Lord, he was made head of Sacrifice.....

These few quotations, to which hundreds of similar purport could be added will make clear the immense cosmic vision that was conjured up by the Sun God and the almost unlimited functions and aspects he could assume in the mind of the vedic Seers.

In the Upaniṣads the cosmic vision of the Vedas is deepened into philosophical speculations on the structure of the universe and the ultimate destiny of human existence. About the function of the Sun, the Maitrī Upaniṣad in Ch. VI. 15–16, says :

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There are two forms of Brahman, Time and Non-Time. What was before the Sun, that was Non-Time, destitute of parts. What is preceded by the Sun, that is Time, possessing parts. The form of that which possesses parts, that is the Year.....This embodied Time is the Ocean of creatures. Yonder Lord, called the Sun, abides therein (as its cause), from which are born the moon, the planets, the year and the rest..... Whatever is seen in this world of good or evil comes from these. Therefore the soul of the Sun is Brahman Therefore let a man worship the Sun under his name Time. (Translated by E B. Cowell)

The dual aspects of the Sun as a cosmic and a spiritual entity is expressed in another passage of the Maitrī Upaniṣad, Ch. VI. 1, which in the translation of A. K. Coomaraswamy, somewhat abridged, reads as follows :

> He (Prajāpati) bears himself two-fold, as the Spirit (prāṇa) here, and yonder as the Supernal-Sun (Āditya)... Yonder Supernal-Sun is verily the outer self, the Spirit is the inner self. Hence the motion of the inner self is to be measured by the outer self....., and conversely the motion of the outer self is to be measured by that of the inner self. For thus it has been said : that Golden person who is within the Supernal-Sun and who from his golden station looks down upto the earth is even he who dwells, consuming food, in the lotus of the heart. These twain, the Spirit and the Supernal-Sun, go forth towards each other. One should laud them with that imperishable word Om, with the utterance Bhur, Bhuvar, Svar, and with the Sāvitrī (Gāyatrī) : "That fiery energy of Savitṛ, be ours the vision of that Angel's (Deva's) glory, may he incite our understanding."

The Gāyatrī mantra at the end of the above quotation is recited, as the essence of the Vedas, at the beginning of every Brāhmaṇa's daily worship. In its original form this hymn addressed to the Sun God is worded thus :

Om Tat Savitur Vareṇyam Bhargo Devasya Dīmahi Dhiyo Yo Naḥ Pracodayāt
(Ṛgveda III. 62. 10)

Proceeding from the transcendent cosmic vision of the Vedas and the subtleties of philosophical and doctrinal speculations in the Upaniṣads and Brāhmaṇas, the conception of the Sun God takes a more tangible form in the Purāṇas. Here the Sun becomes a personified divinity, a divine being with human features, with a history, an ancestry, a family, wives and a progeny, and as such he plays a prominent part in all myths and legens of creation. The Mārkaṇḍeya Purāṇa, in Ch. CI. 11–14 describes the birth of the Sun God :

> The beautiful Aditi was born as the daughter of Dakṣa. Kaśyapa begat on her the divine Sun. He is identical with Brahmā, the conferrer of boons in this endless universe, the beginning, the middle and the end, the ordainer of creation, preservation and destruction. From him emanated this entire universe and in him it is stationed, he is the entire universe with the Celestials, Asuras and mankind. He is identical with all elements and with the soul. He is the great Soul, and he is eternal. Aditi has prayed for it before and therefore the devine Sun was born in her womb.

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Further on in the same Purāṇa, at Ch. CI. 21–24, there is another version of the Sun God's birth :

> When the universe was shorn of lustre and light and was enveloped in darkness, a huge egg, which is the great imperishable Cause, came into being. Living inside it, the divine Ancestor Brahmā rent it asunder : that lotus-sprung deity is the Creator and the Lord of the universe. From his mouth came out the great sound Oṃ—therefrom originated Bhū, Bhuvar, Svar. These three words are the true form of the Sun : and from Oṃ has come out the great subtle form the Sun.....

In Ch. CII, 20–22 the intrinsic form and essence of the Sun God is described thus :

> "The divine Sun is indentical with the Vedas, it is the stay of the Vedas and is called the Supreme Self having the knowledge of the Vedas. Therefore he is the Cause of creation, preservation and destruction and passes under the appellations of Brahmā, Viṣṇu and others (Śiva) by assuming the qualities of Tamas, Sattva and Rajas. He has the Vedas as his form, the entire host of mortals as his form and is without form. (Translated by Manmatha Dutt)

On the human plane the essence of the Sun is defined thus in Ch. CI. 18–20.

> "Clear sublime knowledge, Light, Luminosity eternal and free, perfect Detachment or Emancipation, Understanding, visible Manifestation, Freedom of will and comprehension, Intelligence and Perception, Memory and Discernment—these are the aspects of that luminous form there. (Translated by F. Eden Pargiter)

The Mārkaṇḍeya Purāṇa, in Ch. CIV, 18–24, also relates the great struggle between the Devas and the Asuras, in which Aditi, the Mother of the Devas, implores the help of Sūrya with these words :

> "Salutation to thee who hast assumed a golden subtle form. Thou art the repository of splendour and the abode of those who have splendour. I bow to that form of thine in which thou art beneficent to the world. I bow to thy dreadful form which thou assumest for taking in eight months the water that becomes nectar. O Bhāsvān, I bow to thy most delightful cloud form, which thou assumest at the time of rains. I also bow to thy Bhāskara form, which thou assumest for ripening those plants that spring up from the showers discharged by thee. I bow to thy cold form of dew, which thou assumest for nourishing corn in their time. I bow again, O Ravi, to that gentle form of thine which is neither fierce nor cold, which thou assumest in spring.
> (Translated by Manmatha Dutt)*

In other Purāṇas, the Viṣṇu–, the Liṅga–, the Vāyu– and the Matsya-Purāṇa, the attributes of the Sun God are given astronomical and symbolic significance. The gigantic chariot on which the god is mounted, an attribute already mentioned in the Vedas, is here described

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* The English of all quotations from the Mārkaṇḍeya Pūrāṇa has been slightly adapted.

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and analysed in all its features and measurements. Summing up the various interpretations, the single wheel represents the motion or path of the Sun across the sky, the various parts of the chariot are composed of different measures of time, from seconds to aeons. The length of the pole, being twice its middle part, controls the elliptical path of the Sun, and the chariot of the Sun God, being connected by aerial cords to Dhruva, the pole-star, revolves around the earth like a potter's wheel. The two axles represent Uttarāyāṇa and Dakṣiṇāyaṇa, the northern and the southern path of the sun; the three naves are the three periods of the day or of the year; the five spokes are the five cyclic years; the six peripheries are the six seasons; the length and the breadth of the seat, all refer to the divisions of time. Although there is no unanimity in the details of these descriptions and interpretations, the whole solar chariot and its course constitute the most patent symbolism of the wheel of Time.

4. CONCEPTION OF THE SUNGOD IN THE TANTRAS

In the 3000 years that had elapsed between the impassioned hymns sung to the Sun God by the Vedic Ṛṣis and the great hymn in stone erected to the Sun God at Koṇārka, the significance of the Sun Cult had undergone further important transformations. The cosmic vision of the celestial luminary as the Creator, Sustainer, Nourisher and Ordainer of the universe had more and more given place to an introspective conception, where the Sun came to be almost exclusively conceived as the light of the inner Self. This spiritual conception was already expressed in the Upaniṣads, not only in the Maitrī Upaniṣad quoted before, but also in the Praśna and the Bṛhadāraṇyaka Upaniṣad, where the Sun God symbolises the highest spiritual attainment of those who are on the path to final liberation.

In the tāntric texts, which are of later date, this vision was further developed and deepened in yogic sādhanās. In the "Sūrya Tantra" or "Sūrya Tattva Vistāra," an unpublished tāntric text, Sūrya and his attributes are interpreted in the following way :

> Sūrya is the very Self of the Ātman, travelling in the chariot of living beings.
> The wheel is the very Self of Time, the seven horses are the Life-impulses of creatures :
> Consciousness, Energy, Karman, Activity, Intellect, Strength, Discrimination.
> The All-pervader, seated on a luminous seat, travels across the whole world constituted by the three guṇas.
> The Karmans, composed of Sattva, Rajas and Tamas, he holds tight with his reins.
> The reins are the mind (manas), the driver of the chariot is Illumination or Discrimination (prajñā),
> Aruṇa, who has a head, an upper part, but is bereft of feet.
> The adept yogin worships Bhāskara as the Celestial Void (Nabhaḥśūnya) the Great Void (Mahāśūnya), the Self-Luminous Void (Taijasa śūnya).

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The same text further calls the wheel of the chariot the Sādhanā-Wheel. Its yearly course is conceived as the work of purification of the guṇas, and the progress of the Sun on the path of the Constellations is likened to the progress of man along the stages of Yoga :

> Aries corresponds to the stage of Bhakti (loving devotion), Taurus to the essence of delight,
> Gemini is Love, Cancer the Withdrawel from worldy attachment,
> Leo the achievement of Mastery, Virgo is mental introspection,
> Libra is Evenmindedness, Scorpio is Firmness of Conviction,
> Sagittarius one-pointed Concentration, Capricorn deep Meditation (Dhyāna),
> Aquarius the Extinction of thought,
> Pisces the Realization of Suchness, the Merging into the Supreme Being (Tathasthā).

From this sādhanā arise all the virtues that lead on to the path of No-return (nivṛtti). These virtues are called the Śaktis of Sūrya's chariot (Ratha Śaktibhih). Sūrya is further identified with Truth and Truth moves on one single wheel :

> "When its thundering sound pierces the Ether, the nine obstructions are left behind :
> Selfishness, untruth, malignity, debauchery, anger, greed, deceit, pride and envy.
> Where in the Ether the Sun is worshipped in the form of the eight Ādityas,
> In the Yoga-ether (yogākaśa) there are eight lights and eight saṅginīs.*
> Where in the Ether is the orbit of the Constellations,
> The Yoga-path has eight nāḍīs** and eight saṅginīs."

The Yoga-path is described in the following way : In the Mūlādhāra-cakra Sūrya is called Bhaga and is in the waking state (jāgrat), in the Svādhiṣṭhāna he is called Aja and is in the dreaming state (svapna), in Maṇipura he is called Dhāta and is in deep sleep (suṣupta). This is the place called Nabhaḥśūnya, the Void of Heaven. The Viṣuddha-cakra is the stage of Intellection (prajñā), where Sūrya is called Aryaman In the Ājñā-cakra Sūrya is in the form of Haṁsa, and the stage is called Nidhidhyāsana (constant and profound meditation). In the Mānasa-cakra Sūrya is called Aṁśumān and the stage is that of Dhyānasādhanā (pure inner vision). In the Sahasrāra Sūrya is Pūṣan and the stage of Dhāraṇā (firm hold) is reached. In the Jyotiścakra he is Mahāviṣṇu-Bhāskara. This is the stage of Samādhi (complete absorption in the Supreme), where the great Void, the Māhāśūnya is attained :

> When the Maker of the day is meditatated upon with a mind concentrated inwards,

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* Saṅginī = junction, in yogic terminology.

** Nāḍī = nerve channels, in yogic terminology.

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The darkness of ignorance is step by step dispelled.
Whosoever worships Bhāskara in the Mānasa-cakra as the Lord of the Jyotiś-cakra (circle of light in the inner vision) attains all siddhis (superhuman powers).

Thus the Sun's ascent is shown as taking place not only in the outer world, the macrocosm, but more particularly in the inner world of the human soul, the microcosm. Rising from cakra to cakra along the spinal column, individual consciousness is in successive stages transmuted from initial extroversion to spiritual intellection, till finally the entire being merges into supreme Reality. On the position of Sūrya with respect to the other divinities the Sūrya Tantra says :

"As Viṣṇu lying on the serpent couch (the highest form of Viṣṇu) is the Protector of all the worlds,
As Yogeśvara Sadāśiva, the Lord of Umā, is the highest form of Śiva,
As Hiraṇyagarbha Padmasambhava is (supreme) among Vidhātās,
Thus Bhāskara is the highest self-same Lord of the Sūryas.
He is the highest Brahman, the highest Tattva worshipped by the Devas as the Lord of Dharma.
In the Sahasrāra he manifests himself in a thousand rays.
Thus the Sauras worship him in the centre of the Sūrya-yantra.
Theirs is the following Gāyatrī :
"OM! Bhāskarāya vidmahe, Prabhākarāya dhīmahi, tanno Sūryaḥ pracodayāt !"
(We contemplate this Bhāskara, we meditate on this Light-giver, may Sūrya impel and guide us) !

The same Tantra also gives the Dhyāna of Mahābhāskara :

I contemplate this Bhāskara whose body is like burning fire,
Seated on a lotus throne studded with gems, wearing a bejewelled crown,
Decked with ornaments, saluted by all the planets,
Wearing the constellations as neck-ornaments,
Holding in each hand a white, large, full-blown lotus,
Having a handsome, peaceful countenance,
Saluted by Devas, Gandharvas, Nāgas, Tapis and Kings,
Bhāskara is the Lord of the Firmament."
Thou art the omnifrom (viśvarūpa) divinity containing all the worlds,
Thou, Bhāskara with the bejewelled crown.'

Since in the Sūrya Tantra the form of Mahābhāskara represents the highest stage of perfection attainable by Sūrya sādhanā, and since Mahābhāskara was enthroned in the garbhagṛha of the Padmakeśara temple of Koṇārka, there can be little doubt that the worship for which the temple had been built was inspired by this tāntric school of thought.

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In the Saudhikāgama, the Dhyāna, although differently worded, is based on the same vision :

> The Lord of the day with a bejewelled crown, seated in padmāsana with a smiling face,
> With a lotus-face, with lotus-eyes, holding a lovely lotus in each hand, the entire body adorned with lotuses :
> Thou who lovest lotuses art the Lotus of the world, all gods worship thee.

5. *ICONOGRAPHY OF THE SUN GOD* *

Personification of the Sun God is already adumbrated in the Vedas. Yet it is mainly the Purāṇas with their rich and picturesque legends, which have given rise to the imagery of the Sun God. The human aspect which he here assumes lends itself better to visual representation than the visionary cosmic conceptions of the Vedas. This does not mean, however, that the ancient Seers' pronouncements about the Sun God's subtle being, his essence, had been forgotten. If Sūrya images of the best periods show a great spiritual beauty and depth of feeling, it is a proof that such conceptions formed the eternal background to the inspiration of their creators.

In the Vedas as well as in the Purāṇas the Sun God is often simply called Āditya, son of Aditi, the primordial Mother, who, in union with Prajāpati produced the entire universe. In the beginning the Ādityas, the offspring of these two were six : Mitra, Varuṇa, Aryaman, Bhaga, Dakṣa, Aṁsa, to whom in the last books of the Vedas were added Sūrya and Mārttaṇḍa. In the Atharva Veda they become eleven with the addition of Dhātṛ, Indra and Vivasvat, and finally also the name of Viṣṇu was added, bringing their number to twelve. In the Śatapatha Brāhmaṇa the Adityas are identified with the twelve months of the year, and later all these names, with perhaps the exception of Dakṣa, became names of the Sun God. Thus the Sun God, Sūrya, in course of time absorbed all the Ādityas into his single person and eclipsed them all.

In the yantra underlying the image of the Sun God at Koṇārka there are two concentric lotuses, an inner of eight and an outer of twelve petals. The first represents the eight Ādityas and the second the twelve different aspects of the Sun God, corresponding to the twelve months of the year and the twelve signs of the Zodiac. (See App. No. 5 and 18)

The earliest prescriptions for a personified visual image of the Sun God and his attendants is found in the Aitareya Brāhmaṇa, Ch. 15, part 4. Sūrya is described as accompanied by the Goddesses Dyauḥ (Heaven), Uṣas (Dawn), Pṛthivī (Earth) and Go (Sky), who should be propitiated before approaching him. But Go is sometimes replaced by Sandhyā (Evening Twilight), as a counterpart to Uṣas (the Dawn).

Dyauḥ, the first heavenly consort of Sūrya, is also known under other significant names, such as Saraṇyū (the fleetrunning one) or Sureṇu (golden dust), Rājñī (made of rays)

* Mostly based on Bhattasali's "Buddhist and Brahmanical Sculptures in the Dacca Museum", 1929, and on V. S. Agravala's "Matsya Purāṇa, a Study", Varanasi 1963.

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Saṁjñā (fame, glory), Tvāṣṭrī (daughter of Tvaṣṭṛ), the Architect of the universe or as Prabhā (light, lustre) and Suvarcasā (great splendour). When called Dyauḥ, it would show that the Vedic pair Dyāvā-Pṛthivī (firmament-earth) re-emerged under this new personified aspect as the consorts of Sūrya. Sureṇu is the Mother of Vaivasvata Manu, Creator and Law-giver of the present world-cycle, and of Yama, god of Death and Judgement and his sister Yamī.

Pṛthivī, the Earth-Goddess, Sūrya's second consort, is also known as Chāyā (shadow), as Nikṣubhā or Savarṇā. As such she is the Mother of Sāvarṇi Manu, the eighth or future Manu, of Sani (Saturn) and of Tapatī, the mother of the Kurus. In the Bhaviṣya Purāṇa the name of Nikṣubhā is derived from su = to bring forth, and thus refers to Earth who, impregnated by the Sun's rays brings forth all living beings, spirits and gods, and supports them with food, herbs, milk and nectar and thus is the equivalent of Pṛthivī.

In "Matsya Purāṇa, a Study" V. S. Agravala says : Saraṇyū and Chāyā are both wives of Sūrya, the former is Immortality or Light, and the latter is Death, Shadow, Darkness. That which is Light is also called Saṁjñā, namely Consciousness (Cetanā) and that which is called Savarṇā (of uniform colour ?) or Chāyā is matter." In the garb of Sūrya's consorts reappear the complementary connotations of Mitra and Varuṇa.

Of the other goddesses connected with Sūrya, Uṣas, the Goddess of Dawn, prominent in the Ṛgveda, is hardly mentioned in the Purāṇas and Śilpa Śāstras. And yet, since she is preceding the rising of the Sun, she is in medieval sculpture often represented standing in front of Sūrya. Always youthful and virginal, she has no offspring.

In course of time Sūrya became surrounded with numerous symbolical figures. After his consorts, in later tāntric doctrines called his Śaktis, with a number of descendants and attendants. They all partake of the nature of Sūrya, either on the cosmic or the spiritual plane. The attendants show a great variety in the different texts, in the Brāhmaṇas, the Purāṇas and the Śilpa Śāstras. But in images he is most frequently accompanied by Uṣas and Sandhyā, shooting arrows to both sides or by two male attendants, one standing on his right side with pen and inkstand and the other on his left, holding staff and sword. The one on the right side, bearded and pot-bellied, is in the Agni Purāṇa designated as Agni, registering the good and evil deed of mortals. On account of his ruddy complexion he is mostly called Piṅgala (the red one). The other attendant with staff in hand is called Daṇḍanāyaka (Master of the rod) and is identified with Skanda, the warrior God, son of Śiva. Where merits and sins are recorded he appears to be the punisher of evil-doers, the upholder of divine justice. In the Dhyānas of the Sūrya Tantra, however, these two are identified either with Agni and Vāyu (Air), or with Agni and Ap (water).

As in Koṇārka, Sūrya may also be flanked by two bigger guardians with sword in hand, one being called Māsa (Month) or Divasa (Day) and the other Samvatsara (Year), both registering time and watching over the irreversible ordered course of the days, the seasons and the Years.

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The appearance of the Sun God himself is described in many texts, which all agree that he should have an ever-smiling lustrous, peaceful countenance. Diversity occurs only in his attire which is determined by time and provenance. The Matsya Purāṇa, in Ch. 261, says, that Sūrya should be placed on a one-wheeled chariot drawn by seven horses. He should hold in each of his hands a lotus-flower reaching above his shoulders. His body of reddish lustre should be covered by a breast-plate and two pieces of cloth. His feet should be invisible, covered by their own effulgence. They should never be represented in images, at least not in anatomically realistic shape, and they should not even be described in dhyānas. Whosoever infringes this law would be smitten with leprosy.

Early images of Sūrya of the Maurya and Kuṣāṇa periods, like those of Mathurā, Bhājā, Bodhagayā and even of Elūrā, strictly conform to these rules and show the Sun God standing in the hollow of the one-wheeled chariot, his legs invisible, covered by the front of the chariot.

In the Bṛhat Saṁhitā of King Bhoja (7th century A. D.) the Sun God is described as dressed in northern fashion, wearing boots and having his body protected by an armour. This style of dress, which certainly points to a northern, Iranian origin of the later form of the Son God, must have provided a convenient way of following the prescription of covering Sūrya's body and concealing his legs. Another passage only says that his legs should be covered up to the thighs. He should hold a lotus in each hand, have a smiling face and a halo of light surrounding his head. Around his hips he should wear a highly ornamented belt with two small daggers stuck into it. This may be a survival of the Avvyanga, which was a most important attribute of the Iranian Sun God, and had also to be worn by the Maga priests. Except in South India all later images of the Sun God, where the chariot is reduced to a flat pedestal with a frieze of prancing horses on its front, have the legs of Sūrya been covered by high boots.

The Sūrya Tantra gives an esoteric interpretation of the Sūrya image. It says that the Sūrya maṇḍala is divided into three regions, one above the other. The lowest, taijasa, has the nature of movement, the middle part, prājña, is the breath of living beings, the uppermost is the supreme centre of Brahmā. The lowest, comprising horses and the legs of the Sun God is unformed and corresponds to Atala, one of the nether worlds, the second, from the Mūlādhāra to the Ājñā cakra is the self-unfolding of the universe, the uppermost around the Sahasrāra cakra corresponds to the Hiraṇyagarbha maṇḍala, the golden egg which gave birth to Brahmā, the Creator. The lowest region is of orange colour, the middle region like molten gold, and the uppermost like a flash of lightning. The symbolism is further elaborated from various other angles. The three guṇas, the three Vedas, the three letters of the praṇava AUM, the three divinities : Brahmā, Viṣṇu, Śiva have their correspondences in the three regions of the Sūrya maṇḍala. In the standing images of the Pārśva Devatās of the Koṇārka temple three regions are clearly discernible. The lowest reaches up to the limit of the knees, the shoulders of the attendants and the lower horizontal line of the architectural profiles on both sides. The middle one reaches from there to the shoulders of Sūrya and the upper limit of the architectural profiles, and the uppermost to the prabhāmaṇḍala enclosing

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the head and mukuṭa of the Sun God. In this interpretation of the Sun God's nature appears the most satisfying explanation so far for the rule that his legs from the knees downwards should always be covered or unformed.

Horse symbolism has been intimately connected with Sūrya from very ancient times. The Bṛhadāraṇyaka Upaniṣad begins with the very words : The dawn in truth is the head of the sacrificial horse, the Sun is the eye, the Wind is the breath, the Fire under the name of Vaiśvānara the open mouth, the Year the body of the sacrificial horse.* V. S. Agravala, in his Study on the Matsya Purāṇa says : "He (the horse) is called Aśva because of the principle of movement or dynamic motion that is first released by Sūrya in the cosmic Yajña. Aśva is derived from the root aś = to go." Other meanings of aś are : to reach, to pervade, to penetrate, to pierce, all easily applicable to solar rays.

The horse symbolism also plays a part in the other Paurāṇic Legends. Kālikā-Purāṇa, Ch. 80, tells the story of Sureṇu, Sūrya's first consort, who could no longer bear the heat of the Sun God and fled from him in the form of a mare. She asked Chāyā, her earthly counterpart to take her place by Sūrya's side. But when Sūrya became aware that Sureṇu had deserted him, he pursued her in the form of a stallion, and by their reunion she became the mother of the two Aśvins, the divine Physicians, who are represented as human beings with horses' heads. She gave birth also to Revanta, the hunter god clad in shining white armour, riding a white horse and holding whip and sword. Very rarely Sūrya himself rides on horse-back, in the way he is figured as the northern Pārśva Devatā on the Koṇārka temple. In this aspect he is called Haridaśva, the golden horse, or Haritpati. In the Sūrya Tantra, however, there is a Dhyāna on this particular aspect, in which he is himself called Revanta and is said to have emerged from Dhātṛ's big sacrifice as the Light-horse of great speed, adorned with the seven divine colours. Sūrya is here identified as much with the horse as with the rider. (See App. No. 20)

Otherwise Sūrya, seated or standing, is inseparable from his chariot drawn by seven horses, as described in the Vedic hymns. Only in the earliest plastic representations (4th to 6th Cent. A. D.) his chariot is drawn by four horses like that of the Greek Sun God, Phoebus or Helios. The seven horses of later times are given various symbolic interpretations. The Kūrma and the Viṣṇu Purāṇas say that they represent the seven holy metres of Sanskrit verse : the Gāyatrī, Bṛhatī, Uṣṇih, Jagatī, Paṅkti, Anuṣṭubh and Triṣṭubh. Or, as mentioned in Macdonell's Vedic Mythology, p. 31, they may also represent the solar spectrum, the seven rays of the sun, which have different colours and nourish the seven Planets with different hues. This interpretation is endorsed by the Karmāṅgī of the Koṇārka temple, in which the horses drawing the Sun God's chariot are given different names indicating colours. They are named Rocika (orange), Mocika (violet), Śukla (white), Pīta (yellow), Rakta (red), Nīla (green), Indra-nīla (deep blue). According to still others, Sūrya being the Creator of Time, his horses may represent the seven days of the week. The chariot itself has various astronomical interpretations, mentioned before, but when it is said to run on one single wheel, it is brought into association with Dharma or universal Order and Law.

* Translation by Dr. E. Röer.

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On the solar chariot seven beings are always present, causing heat, cold and rain. They are : an Āditya, a Ṛṣi, a Gandharva, an Apsaras, a Yakṣa, a Nāga and a Rākṣasa. They are changing in every month throughout the year. The Viṣṇu Purāṇa says : "The Sages celebrate his (Sūrya's) praises, the Gandharva sings and the Apsaras dances before him, the Rākṣasa attends upon his steps, the Nāga harnesses his steeds, the Yakṣa trims the reins, the Vālakhilyas ever surround his chariot." *

Moreover, according to the Viṣṇu Purāṇa, the solar luminary is nothing but the energy of Viṣṇu, which is composed of the three Vedas. The Hymns of the Ṛgveda shine in the morning, the prayers of the Yajus at noon, the Sāmans in the afternoon. These correspond to Brahmā, Puruṣa (Viṣṇu) and Rudra, and have respectively the qualities of Rajas, Sattva and Tamas. Viṣṇu in the form of his active energy never either rises or sets and is at once the sevenfold sun and distinct from it.

On the trefoil arches above the heads of the Pārśva Devatās at Koṇārka and also on the front of the chariot platforms, below their feet, there are small dancers and musicians which most probably stand for all the seven heavenly attendants on the Sun God. On top of the side-pillars below the arches on the right and the left are the seated figures of Brahmā and Viṣṇu or Śiva, the Pārśvadeva in the centre perhaps figuring as the third of the Trimūrti.

Inseparable from the Sun God is also Aruṇa, his charioteer, who is the elder brother of Garuḍa, the divine Bird-vehicle of Viṣṇu. Aruṇa is seated in front of Sūrya and of Uṣas, or sometimes between Uṣas and Sandhyā, or between Uṣas and Pratyūṣas. With his ruddy complexion he indicates the first glow before the rising of the Sun. The story of his premature birth told in the Mahābhārata may be intended to account for the fact that he is without legs. But the reason for this mutilation still remains a matter of conjecture, unless one accepts the tāntric interpretation, according to which he stands for pure Intellection and Discrimination, which reside in head and heart and require no feet.

In Koṇārka he had great importance, since he was one of the four Pārśva Devatās. He had a very special place, his seat being on the pillar on the eastern side of the temple, between the mukhaśālā and the nāṭamandira. As the Pārśva Deva of the East, his association with the rising sun is obvious. In the Sūrya Tantra he has a dhyāna, in which he is identified with the first opening of Sūrya's eyes and is endowed with golden wings. He is exalted as the "Creator of all living beings," thus in a way identified with Sūrya himself. (See App. No. 20) **

It is interesting to note that the form of the Sun God called Savitṛ, so beautifully described in the Ṛgveda and the Atharva Veda as the "fair-fingered, golden-handed God, stretching out his arms to all creatures on earth" should have found no visual representation in Indian

* Translated by H. H. Wilson.

** For more detailed information about the iconography of the Sun God and the spread of his cult in India, see the valuable studies of the late Prof. J. N. Banerjea :

(1) Sūrya, in Vol. XVI of the Journal of the Indian Society of Oriental Art, Calcutta 1948.

(2) *The Development of Hindu Iconography*, Publication of the University of Calcutta, 1956, Chapters on Sūrya, pp. 428–445.

(3) Images of Sāmba, Vol. XII of the Journal of the Indian Society of Oriental Art, Calcutta 1944.

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iconography. Yet this conception is almost literally illustrated in Egyptian reliefs of the 14th Cent. B. C. which might be contemporaneous with the Vedic hymn. These reliefs were carved at the command and under the inspiration of King Akhanaton, the great worshipper of the Sun God Aton. From the Sun's disc above the King's head emanante innumerable rays like arms ending in small hands, spreading their blessings on all living creatures.

6. *WORSHIP OF THE SUN GOD IN INDIA*

Although the conception of the Sun God as a divine figure riding on a golden chariot drawn by seven Light-horses was already familiar to the Vedic Seers, worship was not offered to a material image, but, as to other Vedic divinities, it was offered in sacrifices to mental images with sacrificial mantras. The consciousness of a divine presence ruling over the universe and over mankind was evidently strong and deep enough to be able to dispense with images. The symbol that represented Sūrya was a disc of gold placed on the alter. Only in later times the need was felt for visual images to attract the mind and maintain the relationship of the soul with the worlds above earthly contingencies.

The verbal descriptions in the Vedas, Brāhmaṇas and Purāṇas, the various aspects of divinities and their significance crystallized into a rich imagery. The gods representing certain powers were figured in human form and temples were built for housing and worshipping them.

It is now commonly admitted that a strong influence on the form the worship of the Sun God took in India was exerted by the Śaka (Scythian) invaders, who brought the Maga Sun priests from Iran. Apparenly this form was readily assimilated by the people of India, who had been devoted to the Sun God from time immemorial.

The personified aspect of the Sun God determined all later forms of imagery and worship in temples. This cult assumed great importance in the early centuries A. D. The Sūrya temples of Somnāth, Mūltān, Modherā, Kanauj, Mathurā, Avantipura, Mārtāṇḍa, which today have disappeared or survive only as venerable ruins were in their time flourishing centres of pilgrimage and worship.

The Sāmba Purāṇa and the Bhaviṣya Purāṇa trace the worship of the Sun God back to Sāmba, the son of Kṛṣṇa, who did penance on the banks of the Candrabhāgā river in the Punjab, in order to propitiate the great God. They also ascribe to Sāmba the merit of having erected three great temples to Sūrya at Udayācala, Kālapriya and Multan (Mūlasthāna), where he had installed a golden image of the God. Alberuni's INDIA,* Vol. II. p. 184, contains the following note : "The Hindus of Mūltān have a festival called Sāmbapura Yātrā. They celebrate it in honour of the Sun God and worship him." The figure of the Sun God of Mūltān appears on three coins of about 500 A. D.; which show only the bust of the divinity wearing an armour and surrounded by rays.** An inscription at Gwalior records the erection of a temple to the Sun God in the 15th year of Mihirakula (Śāka era 451 or 529 A. D.)

* English Edition by Dr. Edward C. Sachau, published by Kegan Paul, Trench, Trübner & Co. London 1910.

** See Cunningham, Archaeological Survey Reports, Plate XXXVII.

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The Guptas of Magadha were all devoted to the worship of the Sun God. In Shahpur there is an image of Sūrya with an inscription of Ādityasena, dated 672 A. D. and in Deo Barnarak an inscription of Jīvita Gupta II of the early 8th century A. D.

The Vardhana Emperors who came after the Guptas were staunch worshippers of the Sun God, as their names indicate. They called themselves Āditya Vardhana, Prabhākara Vardhana, etc. The great Emperor Harṣa Vardhana even bestowed on his ancestors the title of "Paramāditya-bhaktas" or "Devotees of the Supreme Sun God." Despite general tolerance towards all creeds, the Sun God appears to have been the supreme divinity under his reign. When Huan Chwang, the Chinese Pilgrim visited the court of Harṣa Vardhana in the 7th century A. D., he found in Kanauj a temple to the Sun God, containing an image of the divinity cast in gold and a thousand attendants attached to its service. He writes : "The kings and the high families of the five Indies worship the Deva."

All over Bengal numerous images of the Sun God, even in later times, during the Buddhist period of the Pāla Kings, testify to the widespread cult of Sūrya. The Varmans and the Senas, who succeeded the Pālas called themselves Sauras = worshippers of Sūrya.

7. *THE SUN GOD IN ORISSA*

The great period of Sun worship, influenced by the Maga priests from Iran, slowly spread from the west to the east of India. The legends connected with Sūrya and Sāmba were integrally transferred to Orissa and given new locations. The earliest historical evidence about Sun worship in Orissa is provided by the Sumaṇḍala copper-plate inscription of 599 A.D. of one Mahārāja Dharmarāja who mentions that he descended from Rājā Abhaya of Padmakholya and calls himself a "Devotee at the feet of the thousand-rayed." *

Yet the worship of the Sun God in Orissa was certainly more ancient still and can, as in the rest of India, be traced back to the Vedas. Dīrghatamas, the blind Seer, to whom the Hymn in Ṛgveda I. 164 is attributed is considered a kind of missionary of the Aryan faith in Orissa. This hymn, one of the most difficult of the entire Ṛgveda, gives a profound interpretation of Sun symbolism : Sūrya with his brothers Agni and Vāyu is at the source of all creation, cosmic and spiritual. His chariot is the symbol of the cosmos as well as of the human organism, whose Self is the charioteer. The wheel is the symbol of Movement, that is of Time. One single wheel means Time absolute and Truth absolute, the unity underlying all manifestation. When the wheel is said to be sevenfold it symbolizes the splitting up of that unity into created manifestation. Similarly the seven horses, the seven rays (or cows), the seven colours, the seven notes, seven metres, seven Ṛṣis or prāṇic forces, all refer to the various fundamental energies emerging from the primal undifferentiated unity. Sūrya is also the Great Horse, the Time Horse, ever on the move, immortal. The three naves symbolize the triple nature of manifestation : Spirit, Life and Matter, the three Devas or Prāṇas, the three Vedas, the three seasons, by which the cycle of the year is maintained, the

* Edited by D. C. Sirkar in J. H. Q., Vol. XXVI and by S. N. Rajguru in O. H. R. J., Vol. I. No. I.

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three aspects of Time, the absolute, the differentiated and the concrete time of the material world. Again, twelve spokes of the wheel of Time, which never decay are the twelve months of the year (samvatsara). The twelve constellations (nakṣatras) with the 720 sons of Sūrya, joined in pairs of 360 days and nights are seen as the revolving movement of the Great Wheel. This Wheel, as the principle of movement is the support of the countless worlds. The horses yoked to the chariot are the dynamic Time-principle at the origin of movement, which itself is governed by a timeless, ageless ordinance, the last unknown Mystery.*

Doctrine and symbolism at the base of the Sun God's iconographic representation in Orissa and in the rest of India, however, belong to the second period of Sun worship under the influence of the Magas from Iran. Finally the tāntric doctrines were responsible for much of the later forms of worship and imagery of the Sun God, as will be explained further on.

This seceond phase of Sun worship is based on the legend of Sāmba, extensively related in the Sāmba Purāṇa. From there it has passed with many variations to other Purāṇas, such as the Bhaviṣya, the Brahma, the Varāha, the Skanda Purāṇas. Two different sections of the Sāmba Purāṇa give two main versions of the story widely apart in space and time. One locates the legend in north-west India, in the Punjab, the second locates it on the eastern Ocean, in Orissa. In a very abridged from its content is as follows :

Sāmba was the handsome son of Kṛṣṇa, who, through Nārada's intrigue, was falsely accused before his father of having tried to seduce his wives. The incensed Kṛṣṇa therefore cursed him to become a leper. Although Sāmba could prove his innocence, the curse, once uttered, could not be withdrawn. It could only be mitigated by a promise that Sāmba would be cured of the disease, if he worshipped the Sun God and did penance for a number of years. Sāmba retired to the Maitrī forest on the Candrabhāgā river and underwent rigorous austerities, abstaining from food, subsisting on air alone, with his mental faculties all under control and constantly meditating on Sūrya. After twelve years of perfect devotion, the Sun God took pity on him and appearing before him in visible from, offered to grant him a boon. Sāmba, quite overcome, asked for the blessing of remaining forever devoted to Sūrya. Still better pleased, the Sun God allowed him one more boon, whereupon Sāmba requested to be cured of his disease. This request was immediately granted and Sāmba recovered his pristine beauty. When on the next morning he bathed in the Candrabhāgā river, he found a stone image of Sūrya. The image spoke to him and asked him to build a temple for its worship. When the temple was finished and when Sāmba did not know whom he should call for officiating in it, the Sun God himself asked him to fetch from Śākadvīpa (Iran) some Magas, who were Sun worshippers and were also versed in medicine. He thereupon brought eighteen families of Magas from Iran for the worship in this temple. Their settlement, as the original place from which this type of Sun worship spread all over India, was then called Sāmbapura or Mūlasthāna.

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* See V. S. Agravala, "The thousand-syllabled speech or vision in Long Darkness" and "Matsya Purāṇa, a study."

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The later part of the Sāmba Purāṇa transfers the creation of the first Sūrya sanctuary to the shores of the eastern ocean, into a Tapovana, a forest inhabited by ascetics. The image of the Sun God, according to this later legend, was discovered by the Manus living in the Tapovana. At sunrise, they found it immersed in the ocean doubling the appearance of the sun in the sky. They brought it ashore and Vaivasvata Manu built a temple for it. It is Vasiṣṭha who relates this story to Sāmba, in order to show that the sanctuary on the salt ocean was of far greater antiquity than the one erected by Sāmba in Sāmbapura. The Prācī Mahātmya and the Kapila Saṁhitā, both later Orissan texts, identified Tapovana with the present site of Koṇārka, designated in our texts as Arkakṣetra or Sūryakṣetra, but they still attribute to Sāmba the erection of the temple.*

On the plan contained in text No. I on the Architecture of the temple a small rectangle is drawn in the northwestern corner of the compound, inscribed as Sāmbapīṭha (the shrine of Sāmba) The text mentions only that it contained an image of Narasimha, but it must certainly also have contained an image of Sāmba. In the Baya Cakaḍā text, Leaf LX, 8, Viśvanātha Mahāpātra is mentioned as having made an image of Sāmba in white stone, and in the Karmāṅgī text this image is reported having been taken out and worshipped under the Arkavaṭa on Sāmba daśamī day (Pauṣa śukla daśamī). The text on Architecture makes no written comment and all traces of this shrine have disappeared today.

The Bhaviṣya, the Varāha and other Purāṇas, when relating the story of Sāmba, say that he established three sanctuaries to the Sun God at Udayācala, at Kālapriya near the Yamunā and at Sāmbapura, and that these were consecrated, the first to the rising sun, the second to the sun in the zenith and the third to the setting sun. Udayācala may be the hill in Orissa known today as Udayagiri (sunrise mountain). Situated as it is near the eastern coast of the ocean, it might well correspond to the land of sunrise.

The Brahma–Purāṇa Ch. 28 also identifies the site of Koṇārka as a place of Sun worship :

> "In Bhāratavarṣa on the shore of the southern sea there is a country called Oḍradeśa, where one can find liberation. In this country there is a region consecrated to Ravi whose fame has spread throughout the world. It extends all around for one yojana and bestows enjoyment and liberation..... Its presiding divinity is the Maker of the Day (Divākara), crowned by a thousand rays, whose name is Koṇāditya, who bestows the fruit of enjoyment and liberation (Kāma and parāgati)."

The text goes on to describe the great festival of the Sun God on the seventh day of the bright fortnight of Māgha, when the devotee should purify himself by bathing in the ocean,

* For detailed information on the legend of Sāmba and the spread of the Maga type of Sun worship see : Studies in the Upapurāṇas, Vol. I by R. C. Hazra, Calcutta Sanskrit College Research Series, No. II.

See also : Indische Sonnenpriester (Sāmba und die Śākadvīpīya Brāhmaṇas) by Heinrich von Stietencron (Otto Harrassowitz, Wiesbaden 1966).

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and should greet the rising sun with the mantra of three syllables: Bhū, Bhuvar, Svar and with special offerings. It concludes by saying that whosoever makes this pilgrimage to the Sun God with faith and self-control and sees the Vimāna of red colour, the chariot of the Sun God, arise from the ocean will finally reach the abode of Sūrya.

In the Sūrya Tantra or Sūrya Tattva Vistāra, there is another, semi-historical account, which confirms that the Mithraic form of Sun worship migrated from the northern regions to the south. It distinguishes two different branches of Sun worshippers or Sauras. Those belonging to Śakadvīpa (Iran) are called Arkins, and those besonging to Jambūdvīpa (India) are called Maitrins. It also mentions the various places of pilgrimage consecrated to the two cults. Those of the Arkins are mostly in the Punjab and extend southward to the Gaṅgā and to Western India. Those of the Maitrins range from the Gaṅgā eastward to the Prācī river in northern Orissa and the Candrabhāgā river in the Maitrī forest, the Koṇārka of today. This southern branch which still has many adherents in Orissa is also called the Sāmbika branch, because its followers worship Sāmba together with Sūrya: "The Saurasmārtas there (in the Maitrī forest) are known as the best Magas (Priests of the Sun God)."

The text further says:

> "Among all the trees of this forest is a famous banian tree which spreads its branches for half a krośa (one mile) and is called Arkavaṭa (Sun-tree) of the Maitrī forest. There on Tila (Māgha) saptamī Bhāskara should always be worshipped." "When at any time Bhāskara is worshipped under this tree, all diseases are removed and Sūryaloka is obtained.....Freedom from disease, knowledge, wealth and liberation, these four are the best things giving delight to human beings. Liberation is given by Kṛṣṇa, knowledge is always given by me. Wealth is given by Agni, good health is given by Bhāskara himself."

Thus speaks Śiva in the Sūrya Tantra. Most probably this pronouncement dates from a time when great temples to the Sun God were rising all over India.

In later times the Sun God ceased to be the main divinity of any great temple, and was relegated to the position of a secondary object of worship in the temples of other gods. In Orissa the great Liṅgarāja temple for Śiva was built in Bhubaneśvara in the 10th century and the famous temple of Viṣṇu-Jagannātha in Purī was erected in the 11–12th century. Their cults had by then superseded Buddhism and had taken official precedence over Sun worship. Therefore the revival of Sun worship in the middle of the 13th century, which could produce such a gigantic and extraordinarily beautiful monument as that of Koṇārka is in itself an astounding and puzzling phenomenon. Could an explanation be found for it in the personal devotion to the Sun God of King Narasiṁha Deva alone, whose powerful, compelling personality inspired and mobilized the entire population? Or were still other factors at work? Even though at that time the worship of Śiva, Viṣṇu and the Śakti were in full ascendency all over Orissa, some popular undercurrents may still have survived to perpetuate the devotion

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to the Sun God. We are here mainly thinking of a divinity called Dharma Ṭhākura, who, as indicated by entries in our texts, evidently had many adherents among the artists and workmen of the Koṇārka temple. In the inventory of the workmen's common room at Koṇārka there was an image of Dharma Nirañjana Ṭhākura, which obviously served for common worship.* Its features are not described, but judging from other descriptions of this image, it must have been a simple symbol, a rounded white shape resembling a tortoise. Apart from this the text on Architecture mentions that the lower shrine of the northern Niśā temple was dedicated to a Dharma-mūrti. Its shape is not known, since there is no description and no trace is left of the image, but there can be no doubt, that it was also some form of the Sun God. Further, in the colophon of the Baya Cakaḍā, Viriñci Nārāyaṇa Dharma Devatā is invoked as a witness to the truthfulness of its statements. This function is always attributed to the Sūrya form of Dharma, who in Orissa is today still invoked to attest the truth of a statement. The Sun God is also addressed as Dharma Deva by the Brāhmaṇa who, after the morning bath offers arghya (water) to the Sun. In the temple-compound of Jagannātha in Purī there is an eight-petalled stone lotus on a three–tiered pedestal. Before worshipping Jagannātha, this lotus, being the standard symbol for the Sun God, is invoked as Dharma Deva with the sprinkling of water and other offerings. There are also worshippers of the Sun God in Orissa, who do not use any image or symbol in their cult. Their doctrine or tradition is known as Alekha Sampradāya, Alekha standing for the conception of Śūnya.**

From all this it becomes evident that Dharma worship has existed from early times upto the present day and that the name of Dharma had taken the very precise connotation of Sūrya, the Sun God.*** The abstract name of Dharma has been current in India since the time of the Vedas where it meant Supreme Truth, the divine Law governing the Uuiverse, the justice and balance regulating its functions, the irreversible ordinance in the cosmos as well as in the life of individual beings, and it has since evolved through a variety of interpretations. In Buddhism the term was applied to the Buddha himself, who was considered as the highest incarnation of Dharma, the very body of Dharma (Dharmakāya) and was also identified with the Great Void (Mahāśūnya) and with Nirañjana, the stainless supreme Reality. Since it is formless and nameless, Dharma in later Hinduism could be considered, according to different doctrines, as the formless Brahman of the Upaniṣads, as the Yogeśvara of the Śaivas and the Tāntrikas, as Viṣṇu, as Kṛṣṇa or Śūnya Puruṣa or even as Rāma by the various sects of Vaiṣṇavas. Finally Dharma took also the form of Sūrya.

In this form it had taken deep roots in Orissa. Dharma worshippers of all varieties had established cults with liturgical and devotional texts. One of them, the Dharma Pūjā Vidhāna offers the following meditation :

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* See Baya Cakaḍā, Leaf XXVIII.

** Another form of Sun worship centering round a temple with an image of the Sun God, called Bugudda is still prevalent among tribal people in South Orissa, called the Kolha Sauras.

*** The following extracts are taken from a thorough study of Dharma Cults in Bengal and Orissa by Shashibhusan Dasgupta in his book : OBSCURE RELIGIOUS CULTS, published by K. L. Mukhopadhyaya, Calcutta 1962.

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"Let that Lord in the form of Vacuity, who has neither end, nor middle nor beginning, neither hands nor legs, neither body nor voice, neither form nor any primordial shape, nor fear nor death, nor even birth—accessible only to the greatest Yogins in deep meditation—belonging to all sects (or : permeating all petals within the lotus of the body), bereft of mental constructions, the one, the Stainless, Dispenser of the boon of Deathlessness, let him protect me."

The same text describes the Sūrya form of Dharma also in the following way :

"Dharma is luminous like the Sun, it has the circular shape of Zero (Śūnya) like the Sun, it moves in the Void (Śūnya) like the Sun, and is, like the Sun, the origin or cause of creation, preservation and dissolution. As such it has the nature of the three guṇas, sattva, rajas and tamas, and is in the nature of Viṣṇu, Brahmā and Śiva. Dharma rises from the seven seas in a golden chariot covered with vermilion and precious stones, and is drawn by seven white horses."

The notion of Nirañjana, the Stainless, continued to linger in Dharma, even when conceived in the form of Sūrya, hence Dharma and even Dharma's horses are invariably considered to be white. The changing aspects of Dharma–Sūrya in the course of the day are, however, described in complete accordance with those in the Purāṇas :

"udaya-kāle Brahma-svarūpam, madhyāhne Maheśam,
aṣṭa-kāle svayaṁ Viṣṇuḥ, trimūrttiñ ca Divākaram."*

Also in the worship of the Sun God at Koṇārka these different aspects were kept in mind and different pūjās were offered at the respective times of the day. In the Mahāgāyatrī Temple also three different aspects of the Devī were worshipped at sunrise, at noon and at sunset.

Since Dharma worshippers existed in Orissa from ancient times, and since the notion of Dharma in connection with Sūrya pervades people's consciousness even today, it may well have been, in spite of the growth of other cults, still more forcefully present in the 13th century. As a matter of fact it might have been this antique deep-rooted devotion to the Sun God in the populations of Orissa, perhaps somewhat submerged by new trends in official worship, that now was stirred into new life by the call to build an all-excelling temple to their favorite divinity, the Sun God. This challenge and this great opportunity of giving expression to their innermost feelings might well have released dormant creative forces, which then burst into the unique artistic efflorescence that is Koṇārka.

8. *RĀJĀ NARASIṀHA DEVA I OF THE GAṄGA DYNASTY*

Without venturing to enter into the controversial subject of Orissan dynastic history and chronology, on which the best historians have made extensive studies without coming to

* At sunrise he is in the form of Brahmā, at midday in that of Maheśa (Śiva)
At sunset he is Viṣṇu himself, these are the three aspects of the Maker of the day.

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unanimous conclusions on all facts and figures, we shall quote, only as historical side-lights, a few relevant extracts from the Mādalā Pāñji. These records, though interlarded with picturesque legends, undeniably contain many elements of historical truth. As long as their information is plausible and is not contradicted by factual evidence, there is no reason not to accept it as a working proposition.

There is a record in Fascicle 7 of the Keśarī Dynasty in the Mādalā Pāñji which states, that Purandara Keśarī, King of Orissa sometime in the 9th century A. D. was a great devotee of the Sun God and did pūjā to Aṁśumālin, "the One garlanded by rays," in the Koṇārka kṣetra. There he built a small temple to the Sun God and kept Brāhmaṇas for his worship in eight villages surrounding the temple. He also did pūjā to Sāmba, and on each Tila (Māgha) śukla saptamī day he made offerings to the Brāhmaṇas, bestowing village after village upon them. He called himself a Paramasaura, a devotee for whom Sūrya was the one and highest divinity.

The Baya Cakaḍā also contains evidence that the cult of the Sun God in the Arkakṣetra was anterior to the erection of the big temple by Narasiṁha Deva. One entry on Leaf LXIII, 1, 2 says that when the new temple had been finished and consecrated, an old Sūrya image with worn-out features was with due ceremonies immersed in the ocean.

The Gaṅga Dynasty under Anantavarman Coḍagaṅga had superseded the Somavaṁśī Keśarī Dynasty in the early 12th century invading Orissa from the Deccan. Anaṅgabhīma II, one of his successors, consolidated Gaṅga power in the early 13th century. In the Anaṅgabhīma fascicle No. 21, the Mādalā Pāñji relates that this ruler made a land-survey of all his territories and finished the construction of the present Jagannātha temple in Purī, which Anantavarman Coḍagaṅga had begun on the site of an older smaller temple.

Coming to Narasiṁha Deva I, the son of Anaṅgabhīma II, there is a significant entry in the Mādalā Pāñji relating how, at the very young age of eighteen, he had to fight in the South for three years as the Commander-in-Chief of his father's army. From this campaign he brought home rich booty. This booty—his mother suggested—should be used for building a very large temple (Paramadeula) to the Sun God. She said to him : In the Cakrakṣerta (Bhuvaneśvara) there is the Ekāmra Deula (Liṅgarāja temple), in Saṅkhakṣetra your father built the great temple to Puruṣottama (Jagannātha temple in Purī), in the Gadakṣetra there is the Virajā temple (Devī temple in Jajpur). Only the Padmakṣetra is still without a big shrine. There you should build a very big temple.

The war conducted by the young Prince in the South is probaly not the war against the Kākatīya King Gaṇapati of Warangal, historically attested in the inscription on the Liṅgarāja temple, according to which that war could have taken plaee only in the fourth year after Narasiṁha's coronation at a time when he had already started building the big temple to Sūrya Deva, a fact also confirmed by the Baya Cakaḍā. On Leaf III, 9, it is mentioned that he took more than five hundred workmen who had been recruited for the construction of the temple to join him in the Vijayakoṇḍa (Warangal) campaign. Further, on Leaf XLVII, 2

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it is recorded that a certain number of workmen requested to be released before the temple was finished, saying that they had served the Rājā for over twelve years in war and in peace. The Rājā let them go, after handing each of them a small wrapped up present.

About an earlier war conducted by Narasiṁha Deva in the South there is no inscriptional evidence. The possibility that such a campaign nevertheless occurred is suggested by the Baya Cakaḍā, which, while saying that building operations started in the fifth aṅka of Nārasiṁha Deva, mentions at another place that preparations, planning and quarrying of stones had already begun six years earlier. This would show that work had started on the project when Narasiṁha was still a Crown Prince, and thus confirm the entry in the Mādalā Pāñji mentioned before.

Narasiṁha, a great warrior and powerful ruler, not only repulsed all attacks of the Muslims from the South and the North, but also reconquered territory occupied by them in Gauḍadeśa (Bengal). In 1243 and 1245 A. D. he inflicted crushing defeats on the Nawabs of Bengal, who were supported by the Muslim Emperors of Delhi. In consequence of his victories Orissa experienced relative peace for another 300 years, and thus could preserve its indigenous culture much longer than other parts of India. Orissa was occupied by the Muslims only in 1568 A.D.

From the Mādalā Pāñji and from the Baya Cakaḍā we learn, that Narasiṁha Deva devoted all the enormous booty he brought home from his campaigns to the furtherance of the construction of the big temple. Next to his military and political activities the erection of the temple to the Sun God appears to have been the deepest and most cherished concern of his whole life.

Considering the magnitude of all his enterprises, written records on the person and activities of this great king are relatively few. What has been found in Inscriptions on temple-walls and in the eulogies of his successors has been published in various books and Journals, such as the "ORISSA HISTORICAL RESEARCH JOURNAL," "INDIAN CULTURE," "SOUTH INDIAN INSCRIPTIONS," "JOURNAL OF THE BIHAR AND ORISSA RESEARCH SOCIETY," etc. These records have been fully quoted in Dr. H. K. Mahtab's "THE HISTORY OF ORISSA" Vol. I, 1959, and therefore need not be repeated here.

But there is another document which we consider importent for our subject, and which therefore we would like to quote and discuss in greater detail. It is a poem entitled "EKĀVALĪ," dealing with Alaṅkāra, by the poet Vidyādhara who sings the praises of his patron Narasiṁha in 314 verses. The poem is still an object of controversy among scholars in Orissa. Some hold it to be dedicated to Narasiṁha I, while others think it is dedicated to one of his successors, namely Narasiṁha III. We shall explain why, from internal evidence, from sculptural testimony and from an entry in the Mādalā Pāñji we consider that it could not be addressed to any other ruler than to Narasiṁha I.

The poem starts with praises of King Arjuna of Mālava for his munificence towards the poet Harihara. This may be an indirect compliment to Sītādevī, Narasiṁha's favorite

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Queen, who was the daughter of the King of Mālava. By that time Mālava had already been overrun by the Muslims and many persecuted Hindu scholars had taken refuge in Orissa. Sītādevī is mentioned in copper-plates and in two of our manuscripts : in Baya Cakaḍā, Leaf XXXV, where she visits the temple under construction and makes a donation of 700 māḍha, and at the beginning of the Karmāṅgī text, where she figures amongst the patrons of the temple as a Paramavaiṣṇavī, second in importance only to the Rājā himself. In the same poem Narasiṁha is compared to Rāma, which may again be a compliment not only to him, but indirectly also to his Queen Sītā Mahādevī.

Next the King is praised as a great warrior and hero, because he inflicted a major defeat on the Muslim invaders from Bengal. This prolonged war, which had started in 1213 A. D. under Anaṅgabhīma II, ended in about 1245 A. D. with Narasiṁha's conquest of Rāḍha and Varendrī, two districts of Bengal. His conquest is recorded in copper plate grants of his descendants Narasiṁha II and Narasiṁha IV of the Gaṅga Dynasty. It is also mentioned in the Baya Cakaḍā, Leaf VIII, 23 and Leaf XXXV, 9, where details are given of the booty brought home and the use that was made of it in furthering the work on the temple. References are also found in extracts from the Mādalā Pāñji. (see App. No. 13, 16, 17).

In all probability it was this decisive victory, which in the *Ekāvalī* earned the Rājā the glory of being considered a reincarnation of Viṣṇu's Narasiṁha Avatāra, who tore the demon Hiraṇyakaśipu to pieces and of his Varāha Avatāra, who rescued Mother Earth from the floods that had swallowed her. In view of his audacious military exploits it is only to him that such epithets and comparisons could be rightly applied. He was in fact the only Rājā of the Gaṅga dynasty of Orissa who fought a war of aggression against the Muslims of Bengal, while his successors in the 14th century were content to remain on the defensive. In the *Ekāvalī* he is therefore given the title of "Yavanāvanī–Vallabha" or "Lord of the land of the Yavanas (foreigners, here meaning Muslims) which certainly could not be applied to any of his descendants. He is also credited with the humanitarian action of resettling in Bhuvaneśvara the Sannyāsins of Rāḍha and Gauḍa who were persecuted by the Muslims.

Narasiṁha Deva I is further described as a great devotee of the Devī and honoured with the name of "Durgāputra" or "Bhavānīputra." The appellation is confirmed by images in muguni stone, where he is represented worshipping Durgā Devī, Jagannātha and the Śiva liṅga. This worship is said to have taken place at the beginning of the building operations and was called Durgā–Mādhava-Pūjā. It must have been a rather important act of worship, since it has found representation in three sculptures destined to the temple (See App. No. 14, attesting the Rājā's devotion for the Devī)

In the "EKĀVALĪ" moreover the Rājā is called Śilpajña (Knower of Śilpas), a title more than deserved by his superb building activities, which have left to the world a religious monument of unequalled grandeur and splendour. And if he is also praised as a patron of learning, this is confirmed by the Baya Cakaḍā, who tells us how he liked always to surround himself with learned people. He kept his own agents in the Puruṣottama temple, to spot any

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scholar coming there for darśana. These were then invited to visit the Koṇārka temple in the making and to give their opinion and advice. On leaving they were invariably richly rewarded. Narasiṁha Deva took great precautions that the temple should be built according to proper rules. From the very beginning he established a settlement of Paṇḍits, Knowers of Śilpa Śāstras, near the temple for ready consultation. Yet how many new beautiful features this temple has to offer, not according to the letter but according to the spirit of the Śāstras !

It would indeed be difficult to attribute all these great merits to any one of the descendants, who bore his name. Considering the extraordinary impact of his personality on the minds of the Orissan people, and finding so many concordances with the items of our texts, we are inclined, with Dr.H.K.Mahtab and Śrī Kedāranātha Mahāpātra to assume that the "EKĀVALĪ" poem was dedicated to Rājā Narasiṁha I and not to any one of his successors.*

Another entry in the Mādalā Pāñji, Fascicle 10 of Laṅgula Narasiṁha Deva, recently brought to our notice, does not in our opinion allow any further doubt as to which Narasiṁha Deva the "EKĀVALĪ," was dedicated. The entry reads as follows :

"In his 12th aṅka on the 9th day of Kumbha, Narasiṁha Deva at Saraṅgagaḍa came to know Vidyādhara, a great scholar and poet of the Kauśika gotra. The poet presented him with a book of his, called "EKĀVALĪ," which gave great pleasure to Narasiṁha Deva. On the 23rd day of Kumbha the Rājā said that this work was as brilliant as the light of the moon, and as a reward he gave the poet a village to be called Vidyādharapura, with 7 bāṭi and 9 māṇa land. He kept Vidyādhara as his Court Poet at Sāraṅgagaḍa."

9. *THE SCULPTURE OF KONĀRKA*

The erection of a temple for the exclusive worship of the Sun God in the middle of the 13th century, when Śaiva, Vaiṣṇava and Śākta cults had largely superseded the Sun God's veneration, must have been, as mentioned before, a revolutionary deed. Moreover the Koṇārka temple was not an ordinary shrine, but a monument avowedly meant by its creator to outshine all others in the country in size and beauty. This temple actually incorporated a double purpose, one religious and one temporal. It was not only a sanctuary for the Sun God, but also Rājā Narasiṁha Deva's proud monument to his own military victories. Testimony for this is found in the sculptures in the numerous friezes with battle-scenes, in the mighty war-elephants and war-horses, and perhaps also in the gigantic rampant lions soaring above vanquished, flattened elephants. These lions, although being traditional symbolical motifs, may have here a very concrete, personal significance. The Rājā also glorified his own person in numberous reliefs showing him in various activities, religious and profane, last not least on the

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* See ORISSA HISTORICAL RESEARCH JOURNAL, Vol. VIII, No. 2. July 1959 "King Narasiṁha eulogized in the Ekāvalī of Vidyādhara" by Śrī Kedāranātha Mahāpātra.
and ORISSA HISTORIC RESEARCH JOURNAL, Vol. XI, No. 3, 1962. "New data on the date of (i) Ekāvalī and (ii) Sahitya Darpaṇa" by P. Acharya,
which elucidate the two contrary opinions.

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pedestal of the pūjā-image, in the very garbhagṛha, where he is shown humbly kneeling and receiving the garland of command (ājñā-mālā) from the neck of the Sun God, the highest conceivable honour.

It is doubtful however, whether royal ambition alone could have achieved such a feat. The temple bears the imprint of a powerful spiritual current that animated its builders, from the man who conceived the plan to the artisans who carried it out. Although it is the last of the great Orissan temples, a fresh vision and a new vigor are here infused into traditional forms. The repertory of motifs prescribed by rules of iconography not only appears in unusual formulations, but is enriched by many hitherto unknown subjects. An unprecedented outflow of imagery in its exuberant imagination and its immense love and passion for life leaves no sphere of existence untouched. It expressess all shades of feeling, from adoration of the transmundane and divine to admiration of royal glamour and splendour, from exaltation of living beauty to the passions and emotions of ordinary worldly life. Even the queer, the odd and the grotesque, treated with a superior sense of humour, are not out of bounds. In the acceptance of life in all its aspects the imagery has so-to-say adopted the view of Sūrya himself to whom nothing is hidden, who looks upon everything in perfect equanimity, who smiles upon life and recognizes the inevitable necessity of opposites in the interplay of light and darkness, of Sattva and Tamas.

If this can be said for the astounding variety of subjects represented on the temple, it is particularly true in respect to the profusion of erotic images, which, on account of their totally uninhibited character, were a scandal to 19th century onlookers. Today they have been submitted to serious and comprehensive studies.* But, apart from the facts of life, what were the sources of their inspiration ? While the hieratic, serene, luminous style of the pūjā images of Mahābhāskara and the Pārśva Devatās is founded in the canonical texts dealing with the Sun God's mythology and symbolism, the sensual, voluptuous imagery surrounding them cannot be traced to the devotional spirit of these texts. Neither do the texts of the Dharma Cult, which might have nourished the worship of the Sun God, provide any clue to explain the unusual predominance of erotic images. Nor does the Karmāṅgi, the manual on the temple ritual, of which we are giving extracts, hint at any sexo-yogic practices, which were meant to be shown. The source must be sought elsewhere, probably in some other heterodox religious movements that were then current in Bengal and Orissa, such as that of the Vaiṣṇava Sahajiyās who had inherited the tradition of the Bauddha Siddhācāryas, the dissident, free interpreters of Vajrayāna Tāntric Buddhism.**

The path of the Sahajiyā was the path of a yogic sādhanā, in which the physical form was considered to be as real as the spiritual essence, and in which therefore the body was regarded as the temple of worship. Sahaja means : Search for ultimate Truth in one's innate nature, in the divine, immortal essence of one's own Self, and not in a divine Being above the world of the living. Poets of the Sahajiyā Schools, both Buddhist and Vaiṣṇava, scorned

* See Kanwarlal : The Cult of Desire, and
Alan Watts : The Temple of Konarak (Erotic Spirituality)

** See Shashibhusan Dasgupta : Obscure Religious Cults. Ch. III, IV, V. (K. L. Mukhopadhyaya, Calcutta).

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official worship with its dogmas and rituals and revolted against all formality in life or religion. They did not believe in the practice of austerities by fasting, reading, meditating, reciting mantras and leading a celibate life. Instead of trying to suppress natural urges like hunger and sex, which they accepted as ineradicable, they used them as helps for Self-realisation. Their yogic practices were aimed at sublimating sexual emotion into spiritual extasy, where union with the Supreme would be attained, or non-duality of Puruṣa and Prakṛti. By a process of physical and phychic discipline, human love, beginning in the form of carnal desire, would gradually progress towards an emotion of Love divine or supreme Bliss, Mahāsukha, unfathomable in extent and depth, merging into Mahāśūnya, the perfect Void. Kāma, physical desire for self-satisfaction would be transfigured into Prema, self-surrender and fulfilment of divine desire with one's whole being. Prema is the purified form of Kāma and thus—they said—cannot be attained by the negation, but only through the transformation and sublimation of Kāma.

Such a Yoga could not be learnt from books, but required the initiation of a Guru, who had realized this Truth in himself. It could be transmitted only in utter secrecy and thus the practices connected with it remained known only within the circle of adepts. Their inner experiences, however, which reflect an intense joy and love of life found expression in the songs of wandering Yogis and Poets.

The Śakti, who was a necessary adjunct in this form of Yoga, may in some cases have been a purely spiritual conception, but more often than not appears to have been a living female companion. No wonder then that a sādhanā aiming at identification with highest Reality through association with the Śakti and finding in her highest Bliss, would use enigmatic, passionate imagery to express its experience. The images depicting the Śakti of the Sahajiyās were however not the sublimated, spiritualized ones of the Goddess found in orthodox tāntric texts, but were intentionally borrowed from most ordinary earthly life.

Among Buddhists the Śakti was called Ḍombī, Śavarī, or Caṇḍālī. * Kanha Pāda, one of these poets sings: "Outside the city, O Ḍombī, is thy cottage, I shall keep company with thee, and for this purpose I have become a naked Kāpālika without aversions." "The uninitiate speak ill of the Ḍombī, but wise men never separate her from their necks." "The aristocrats are outside thee, the Kapālis are within." "By marrying the Ḍombī, the Kapālin escapes from rebirth and obtains as a dowry the transcendental region of Mahāsukha. He remains maddened in Sahaja Bliss and sports in the city of his body in a non-dual form."

Another bard has taken the name of Śavara-pāda, which means a barbarian, a savage, a mountaineer wearing peacock feathers. He sings: "High is the mountain (the spinal column) and there (in the Mahāsukhacakra) sits the Śavarī girl, decorated with peacock feathers and wearing flower garlands on her neck. O entranced, mad Śavara (exclaims the girl) do not revel in wordly pleasures, I am thy beloved consort Sahaja Sundarī. On the

* A Dombī is a low-caste woman singing and dancing for a living, a Śavarī is a woman of a savage tribe living in the forests, a Caṇḍālī is an untouchable woman.

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mountain, many are the trees whose branches touch the sky—the Śavarī girl, wearing earrings and holding the thunder, plays alone in that forest." In another song he says : "The bedstead of the three elements (body, speech and mind) is placed and the serpent-like Śavara (citta) and the goddess Nairāmaṇī (destroyer of afflictions) pass their night of love on that bed in great bliss."

In the ambiguous symbolic language of such songs a clue may be found to some of the curious mithuna images on the temple, as for instance to the recurrence of a wild man with dishevelled hair embracing a rustic female with great delight, a real Śavara with his buxom companion. Also Yogis are frequently represented in close embrace with women, reminding Kanha-pāda with his Ḍombī. Or a Yogin is standing between two women holding both in his arms. They may suggest the image of Suṣumnā between Iḍā and Piṅgalā and the blissful union of the three nāḍīs, or, eventually the Mahāsukha experienced by the convergence of Prajñā and Upāya in the Bodhi-citta. The mithuna images might be understood as representing various stages of transformation and sublimation attained by Sahaja sādhanā. The sculptures indeed range through all forms and degrees, from lascivious, debased and even perverse copulations to the rapturous, transfigured beauty attained in an ultimate spiritual merging of body and soul. Their artistic quality even appears to be varying in accordance with their level of reference. Besides the unequalled masterpieces on the upper parts of the mukhaśālā walls there are mithuna groups on the basement of the temple which, though never sordid. remain crude and primitive in execution and expression. In spite of this an innocent joy is animating all figures, and one cannot help feeling a kind of worldly spirituality or spiritual worldliness permeating the entire sculpture work of Koṇārka. A deep love that saw Life divine in all forms and aspects of creation inspired every chisel stroke with a potency, that even today strongly radiates from its ruined stones.

A significant passage in the Brahma Purāṇa, Ch. 28 mentions that Koṇārka was a place conferring Kāma (enjoyment) and Parāgati (liberation) on the worshipper. This may suggest that it was not a place meant exclusively for ascetic practices, but that here Deliverance could also be sought through Enjoyment.

Besides the mithuna images there are many other small scenes, which so far have defied interpretation. A thorough study of Sahaja texts, both Buddhist and Hindu, and their parabolic language may possibly yield a clue to these enigmatic sculptures.

Despite the great variety in the character and style of the sculptures in one and the same temple, there is nowhere discrepancy or disharmony. The setting of each group or sequence perfectly suits its surrounding and its place. Contrasting elements are juxtaposed with an unfailing tact, so as always to enhance each other's relevance : Three dimensional, monumental figures are set against flat or slightly chiselled surfaces, thus the powerful musicians and Bhairavas on the roofs of the mukhaśālā are placed against the soft modelling of the relief sculptures at their back and the flat friezes on the borders of the roofs, their vertical shapes giving articulation and support to the horizontal lines of the tiers. The contorted, impetuous

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lines of the Virālas in the recesses of the śikhara and the mukhaśālā walls are embedded in the delicate ornamentation of the projecting wall-pilasters. Also the dramatic big mithuna scenes of the upper mukhaśālā walls are sunk into flatly chiselled frames. The colossal rampant lions with their violent movements, now lying on the ground, once jutted out from the sober, severe outlines of the temple śikara.

The hieratic monumental style was reserved for the pūjā image of Mahābhāskara in the inner shrine* and the Pārśva Devatās in the upper parts of the niśā-temples, who also received worship. These were encased in severely plain niches, just as the Pūjā image was enclosed in a plain-walled sanctuary, where nothing could distract the worshipper's concentration of mind. The contrast between the serene, majestic figures of the great Sun God, and the doing of the small mortals, depicted with sympathetic yet uncompromising veracity on the outer temple walls, vividly suggests the contingency and relativity of the human world as against that of the great Gods.

The figures of the Sun God are far superior to the best sculpture produced in Bhuvaneśvara two centuries earlier, and are equalled only perhaps in mediaeval Orissa by the large figure sculptures of the destroyed Devī temple in Jajpur. They almost attain to the grandeur of the ancient Cave-temple sculptures in western India, save that they are more richly ornamented with finest chisel embroidery and thus appear more nearly human.

The numerous musicians on the roofs of the mukhaśālā show a grandeur of conception never met with in earlier Orissan temples. The enormous rampant lions, the war-elephants and the various horses are beings endowed with a soul. They are conscious of their significance on the temple and thus forbid their being considered as mere animals.

The Dikpāla and Rājā images from the vimāna and the mukhaśālā, carved in black chlorite in neat and polished shapes, form a class by themselves. Scenes from the Rājā's life are composed of figures not more then a few inches high. With their amiable narrative style they have a remarkable power of expression and a finish, perfect down to the minutest detail. They also were slightly recessed in architectural frames, but unfortunately none has remained in situ and are now scattered in Museums in India and abroad.

Since the niches and wall-pilasters always provide a frame-work and divide one sculptural entity from another, there is nowhere an overcrowding of figures to disrupt the unity of the architectural line. Every figure, standing at its proper place, has breathing space, and no single form, however mighty, can overpower the rest. Nor can the individual rhythm of any composition or single figure come into conflict with the rhythm of its neighbour. This creates an articulate, living unity, where simplicity of outline and wealth of inner detail balance one another. The scale of proportions is so perfectly graded that, from whatever distance, far or near, the temple is viewed, ever different new features come into evidence, ever opening a new approach. From colossal, freestanding monumental sculptures to finest chisel embroidery

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* See the drawing on Pl. 73.

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work, all speak their own language, but all are perfectly integrated into the harmony of the whole.

10. THE ARCHITECTURE OF KOṆĀRKA

However tentative or speculative our interpretation of the sculptures of Koṇārka may at present appear, our analysis of its architecture stands on somewhat safer ground. Here a technical text, the Śilpasāriṇī, has confirmed our intuition that a cosmic vision operating with fundamental principles crystallised in geometrical forms was at work in the planning and construction of the temple. This text clearly describes the perfect disposition and build-up of the main temple and mukhaśālā. We shall try to analyse some of its most relevant features, although the ultimate rationale behind such a plan—the knowledge of the initiate—may forever remain the secret of the ancient temple builders.

We give in App. No. 2, a the groundplan design drawn according to the Śilpasāriṇī and an abridged description of this largest temple type in Orissa, there called the Mahāpraśasta garbha and mukhaśālā, or Sarvatobhadra Sāmapīṭha. In App. No. 2, b this groundplan is placed in transparency over the groundplan of the Koṇārka temple, established by the Archaeological Survey of India. This will show that the Koṇārka temple is built exactly on the pattern of the Mahāpraśasta garbha and mukhaśālā. This groundplan has an extraordinary elegance: all its parts are interwoven in clear geometrical patterns, which we have demonstrated by dotted lines and circles. The circles indicate the correlations of measure and size, while the diagonals indicate the dynamic relationship between all parts of the building. The diagonals reach out from the centre of one structure to the edge of the adjacent structure: from the centre of the garbhagṛha to the outer edge of the mukhaśālā, and from the centre of the mukhaśālā to the outer edges of the niśā-temples. The three niśa-temples are all connected from centre to centre by their diagonals whose outer parallels enclose them into one big oblique square. Thus all the five structure hold together in a harmonious, well-balanced whole. Over and above that, the measures of the structures are related to one another. There are only three main measures governing the whole. The first is marked by the circle enclosing the inner edges of the garbhagṛha which is equal to that encompassing the space between the pillars of the mukhaśālā and to that enclosing the outer edges of the niśā-temples. The second measure is marked by the circle encompassing the outer edges of the vimāna, which is equal to that enclosing the inner wall-corners of the mukhaśālā. These two circles touch one another in the passage between garbhagṛha and mukhaśālā. Finally there is the circle encompassing the outer edges of the mukhaśālā which extends to touch the smallest circle around the inner space of the garbhagṛha. And when the same circle is drawn from the centre of the garbhagṛha it will conversely come to touch the other smallest circle within the pillars of the mukaśālā. Thus there are no two forms, no two dimensions that are not in one way or another related to each other.

The elevation of the Mahāpraśasta mukhaśālā is made according to a mūlasūtra one and a half time bigger than that of the groundplan. This only means that 18 mūlasūtras of the

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groundplan are equal to 12 mūlasūtras of the elevation, but since the mūlasūtras are divided into equal upabhāgas, two for the groundplan and three for the elevation, there is no discrepancy between the two. In App. No. 2, c we give a design of the elevation made according to the description in the Śilpaśāriṇī. Since some of the measurements here did not, however, tally with those of the groundplan, and since ciphers in these manuscripts were always liable to be incorrectly rendered by the copyists, we have made certain adjustments in exact conformity with the dimensions of the groundplan. In this way a result has been obtained which is quite in accordance with the actual building.

The elevation of this temple, the Mahāpraśasta Pañcaratha Prāsāda is in the Śilpasāriṇī described as an enlargement of the Mahākailāsa Prāsāda, the model of the Liṅgarāja temple in Bhuvaneśvara. (App No. 2, d and Pl. No. 48). The temple is built with exactly the same structural elements and with the same proportional relations between its various parts. Only its mūlasūtra, its fundamental unit of measurement is one and a half times that of the Mahākailāsa temple, and thus the entire temple would attain to one and a half times the height of the latter. The height of the Liṅgarāja temple being about 140′ and the height of the Koṇārka temple being estimated as having been around 220′, the relationship between the two fairly well corresponds to this basic theory. (See Pl. No. 48, Liṅgarāja temple). The śikhara of the temple should have three inner ceilings, which means three corbelled roofs, one below the eastern rāha siṁha, one at the viṣama (shoulder) below the neck (beki), and one inside the beki below the āmalaka (See design in App. No. 1 and 6). The only structural difference is noted in the niśā-temples, which in the smaller temple are in the form of open maṇḍapas on pillars but in the larger temple are so only in their upper part, the lower parts being built with wall-work similar to that of the vimāna. The mūlasūtra governing their architectural and sculptural elements is however, only 1/4 the size of that of the vimāna. The niśā-temples should reach in height only to the end of the garbha melāna, but no further.

This type of temple is extolled by the Śilpīs as the Temple beloved of Sūrya (Sūrya Vallabha Prasāda).

Unfortunately the only structure which today can be seen in Koṇārka in its total build-up, and even that shorn of its kalaśa, its portals and prominent wall elements, is the mukhaśālā. Although originally it was only an adjunct of the gigantic vimāna (See Pls. No. 2 and 6–9) and now stands alone, bereft of its background, it does not look like a lost appendage but is in itself a monument of extraordinary beauty. The proportions of all its parts, the relationship of the high basement to the wall and to the roof, the angle of inclination of the pyramidal roof-structure, the play of light and shade between the projections and recesses of roof and walls, are so precisely and delicately balanced that they create spontaneous elation in every beholder.

We may here point out some particular features which distinguish this from other Orissan temples and greatly enhance its nobility and monumentality. One important feature is the high understructure with the three great stairways leading up to the three portals of the mukhaśālā. The portals were originally covered by broad trefoil arches on projecting ornate pillars. The stairways were flanked by sidewalls as high as the basement which carried on their

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front, facing outwards, the monumental groups of war-horses and war-elephants, which now are placed on pedestals in the compound, facing the opposite direction. The lion-elephant groups are now below the Naṭamandira's eastern stairway (See Pls. No. 6, 80-82 and 97-98) The high understructure of the temple is punctuated not only by pilasters and niches, but by twenty-four chariot wheels, placed at rhythmic intervals, which give the whole temple, despite its enormous size, a moving lightness. On the eastern side the wall is flanked by seven horses, pulling the chariot, four on one and three on the other side. (Pl. 78–79)

The pyramidal roof of the mukhaśālā has, instead of the usual two, three series of horizontal tiers. In the interval between the first and the second, and between the second and the third series are the splendid, ponderous figures of the female musicians and the dancing Bhairavas above the portals. These figures, sculptured in the round, give the necessary vertical accents between the horizontal tiers of the roof, providing elevation and aereal lightness. (Pls. 67–74). So do the walls at their back, modulated with relief carvings of architectural and figural motifs. (Pl. No. 73)

The Nāṭamandira also has features which distinguish it from others of its kind. Not being attached to the main temple, it stands as an independent building with four facades. Its groundplan, being laid out on a yantra of the nine planets, has nine compartments in a square divided by sixteen broad, massive pillar-walls. Like the main temple, it is placed on a high understructure with a broad berm all around. It has stairways on all four sides, the one towards the main temple being double and addorsed to the wall of the basement. (See App. No. 4)

Yet another unusual plan is that of the Mahāgāyatrī temple. It is constituted of three different parts built up on three yantras, which are dedicated to three different aspects of the Sūrya Śakti, meant to be worshipped at sunrise, at midday and at sunset. It was a small rekhā temple with the customary mukhaśālā under a three-tiered pyramidal roof, but had the unusual addition of a long open platform extending in front, covered only by a flat roof. (See App. No. 19 and Pls. 99–107.)

Not only in their general build-up, but also in the specific articulation of their wall surfaces, an interesting differentiation in style marks the three temples. The central shrine, the Padmakeśara temple has the most vigorous plastic organisation. This is due in the first place to the addition of the three niśā-temples on the flanks and the back of the vimāna and to the three monumental stairways jutting out from the sides and front of the mukhaśālā. There is further a sharp articulation of pāgās with their wall-pilasters and cornices, between which a rich array of sculptures display a riotous life : human scenes, mithuna couples, nāgas, kanyās, virālas, etc.

The walls of the nāṭamandira by contrast have a restrained, almost unnoticeable articulation of pāgās. Their surface is treated in delicate undulating rhythms by the stepped wall-pilasters and smaller vertical elements in their intervals. These are enlivened with less ponderous figures than those on the main temple : dancers and musicians, jesters and baffoons, humorous

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and even grotesque, moving airily, playfully, tingling with the joy of life, perfectly appropriate to a place where dance and music was performed in honour of the Sun God.

In the Mahāgāyatrī temple, or in what remains of it, the style is more severe, predominantly formed of vertical architectural elements closely set in sharp, rhythmic sequences. Figural sculpture is far more sparse, encased within architectural frame-work, but is everywhere of a singularly intimate, delicate lyrical quality.

However different in style the various architectures in Koṇārka may be, their integration into one grand final unity is achieved in a way which appears as natural and effortless as the growth of various trees from the same soil. The architectural planning, and the quality of the sculptural work here were of a far higher intellectual and artistic calibre than in the earlier big temples of Bhuvaneśvara and Purī. No wonder that Fergusson would not believe that such a monument could have been created so late in the development of Orissan art and, accepting the statement of Abul Faz'l, presumed it to date from the 7th century A. D., the time of the great Cave temples in western India.

Such a powerful fresh artistic efflorescence in the middle of the 13th century is actually not easy to explain : whose imagination was it that created such a perfect plan, introducing many new features without breaking the sanctioned traditions ? And from were emerged all of a sudden the galaxy of outstanding artists capable of translating the plan into reality ? Giving form to such a grand vision demanded more then the general professional ability even of those fortunate times, when religion and art went hand in hand as the fundamental supports of human life. What were the incentives that caused this renewed stupendous manifestation of Sun–worship, where everything breathes the full joy of living ?

May it be that a feeling of security gained by its triumph over enemy forces had inspired popular consciousness to express this feeling in a vision of divine Light ? Or were still other mysterious psychic forces at work, which enabled artists thus to surpass themselves ? At any rate it appears that behind this unique achievement was operating a constellation, which the Saudhikāgama declares to be extremely rare, when it says: "The Stāpaka is like Śiva, the Brāhmaṇa is like Brahmā, the Rājā is like Viṣṇu, but in the three worlds it is difficult to find these three together."

11. BRIEF DESCRIPTION OF THE FOUR PALM LEAF MANUSCRIPTS

Manuscript No. I

THE ARCHITECTURE OF THE PADMAKEŚARA TEMPLE

This illustrated manuscript, consisting of 23 leaves, is, according to its colophon, a copy of the report on a survey, which Rājā Puruṣottama Deva of the Khurda Dynasty (circa 1607–1621 A. D.) ordered to be made in the 4th aṅka of his reign (about 1610 A. D.) of the three major temples in his country : the Liṅgarāja temple in Bhuvaneśvara, the Jagannātha temple in Purī and the Padmakeśara temple at Koṇārka. This survey is referred to also in the Puruṣottama Deva fascicle No. 3, leaf 7, of the Mādalā Pāñji.

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Another incomplete version of the same report was found in the Naṭeśvara Maṭh just below the Koṇārka temple. It contains only a big drawing of the temple on one side and on the reverse nothing but measurements of single parts.

A drawing of the front view of the temple with only a short inscription below was found in Gagapur (See Plate No. 6.).

The manuscript which is here translated in full is far more detailed. It gives a description in words and images of the entire structure as well as of its single parts. On the front side it begins with four leaves showing a sketchy impressionistic drawing of the silhouette of the of entire temple complex. This is followed by four leaves showing a small groundplan, a diagram with the disposition of the wheels and the mystic yantras on which the various edifices are based. Then comes a big and detailed drawing, covering nine leaves, of the main temple with its mukhaśāla, as it stood before its fall. Two more leaves show the Nāṭamandapa or Bandāpana Maṇḍapa, as it was called, with a groundplan and the Aruṇa stambha. On the reverse side of these leaves there are diagrams, designs and descriptions of the structural elements of all the temples. Two additional leaves, which on account of their different length and different script appear to have belonged to another manuscript, describe and illlustrate on their front side the Gate temples and the Mahābhāskara image of the main shrine, and on the reverse plan and elevation of the kitchen building. Unfortunately one or two leaves of this addition appear to be missing, since the front-side of the first leaf shows the base of some building, probably of the Mahāgāyatrī temple described in the text below, a pedestal and the base of an image which must have been that of the goddess of this temple.

Manuscript No. 2

TRIKĀLA MAHĀMĀYĀ ARCANĀ VIDHI

The second manuscript, written in Sanskrit, shows on the first eight leaves a full design of the Mahāgāyatrī temple which is inside the compound to the south-west of the Sun temple and the three mystic yantras, on which its three parts were built. Surrounding the design of the temple are the personified figures of the nine planets and of the twelve Ādityas=the twelve different aspects of the Sun during the twelve months of the year. On one side there is also a design of the ten-armed figure of Mahāgāyatrī Devī, to whom the temple was consecrated. These leaves are followed by eight further leaves which contain a text extolling the greatness of the three Sūrya Śaktis : Mahāgāyatrī, Sāvitrī and Sarasvatī, who all reside in this temple. It also explains the meaning of the three yantras representing the three goddesses with their mantras and the mode and time of their worship. The last part describing the pūjās offered in this temple has been omitted in the translation.

Manuscript No. 3

BAYA CAKAḌĀ

The third and biggest manuscript is the Baya Cakaḍā, consisting of 73 leaves, which have been translated in full. It is a book of accounts, recording the expenditures that went

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into the construction of the Padmakeśara temple, the Nāṭamandira, the Mahāgāyatrī temple, the Gate temples and the compound wall. It starts from the 5th aṅka of Rājā Narasiṁha Deva with the excavation for the foundation of the big temple and ends in the 18th aṅka of the Rājā, with the consecration of all the shrines and their images. The Baya Cakaḍā does not include, and only incidentally mentions, six years of previous preparations, during which plans were drawn up, stones were quarried and workmen recruited throughout the country. This fact would lend support to the entry in the Mādalā Pāñji (Introduction, para 8) from which the inference can be drawn that Narasiṁha Deva conceived and began to plan the temple even before he became the ruling Rājā.

The main interest of the text does not lie, as might be expected from a book of accounts, in figures and data which would allow a calculation or at least an estimate of the enormous outlay that went into the construction of the Koṇārka temple. First of all, the text has obvious gaps, and therefore does not present the entire expenditure. Secondly, the ciphers for the single items sometimes make doubtful reading. Thirdly, the purchasing power of the local currency, the gold māḍha, cannot be exactly known, and hence also the payments made in kind can only be guess-work. Lastly, the accounts kept during six years of preparatory work are not included. Those accounts were deposited in the Puruṣottama temple, where they are perhaps still lying among the heaps of unexplored palm-leaf manuscripts which may some day come to light for the benefit of future research.

Popular tradition, which was also picked up by Abul Faz' l, has it that the revenue of the whole country during twelve years went into the building of the great temple, but this is nowhere mentioned in our book of accounts. It also seems hardly possible that at any time the entire revenue of a country could be diverted to the building of just one monument, thus depriving all other departments of their legitimate share. Most probably, the tradition only reflects the people's somewhat exaggerated conception of the vast resources that were for many years lavished on the construction of the temple.

The main interest of the text lies in its human and social aspects, presenting as they do a detailed chronicle of one of the greatest undertakings in the history of Indian temple building. It provides exact information about the work processes, the organisation of labour and the relationship between patrons, administrators, artisans and labour forces, about the personalities and qualifications of all those who collaborated in this enormous work, from the experts in Śilpa Śāstras and the priestly advisors to the architects and sculptors with their various specialities, to the masons, the stone-cutters, the quarrymen and the auxiliary labour forces. It also provides valuable documentation on many technical matters which have hitherto remained a mystery, such as the provenance of the various building stones, and the methods used for quarrying and transporting them, the technique of lifting enormous blocs to considerable heights and the process of casting huge iron girders used in the construction.

But the purely human side of this chronicle is perhaps still more fascinating. It is evident that the workmen were no simple mercenaries, and still less slaves, but were personally and emotionally involved in the creation of the temple. Everyone participated in the develop-

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ment and progress of the work and everyone knew what was demanded of him from stage to stage. Even those in the inferior ranks must have been fairly well acquainted with the plan of the construction, since all decisions about additions and alterations taken by the leading architects were announced to them throughout the camps by beat of drums. One instance is recorded where the Sūtradhara after finishing the big temple convoked all the sthapatis to a conference to finalize plans for the other temples. (See Baya Cakaḍā, Leaf XXXIV, 6, 8) The workers were also intimately associated with the religious celebrations that marked the completion of various stages of the construction, and were on such occasions regaled with feasts and presents. Loyalty and love towards their work alone can explain the phenomenal endurance of the artisans keeping up their arduous efforts during twelve long years. The work never betrays any sign of tiredness, but throughout pulsates with a freshness and vitality, which even today speaks from the smallest stone fragment. Only once in the final period did a short crisis become apparent, perhaps due to sheer overwork and exhaustion. The work had to be stopped, yet dissentions were soon overcome by the good offices of the supervisors.

The relationship between the organisers and leaders of the enterprise and the executive of the artisans and labour forces was evidently a friendly and dignified one, although the prevailing discipline seems to have been rather strict. On the rare occasions when work was delayed by negligence, or even by wrong suggestions, resulting in a loss of time, the man responsible was fined and the fine deposited in the treasury. Nevertheless, the supervisors evidently knew how to temper their vigilance with benevolence and thus to maintain zest and goodwill to the very end. They must have commanded general respect and fulfilled their duties conscientiously and impartially, because not a single case of unjust punishment, of neglect or misappropriation is recorded in the entire chronicle.

The technical process of construction was organised with mathematical precision and with astonishingly clear foresight. Never was any time lost between one stage of the work and the next. As soon as one layer of stones had been set up, stones for the next layer, cut into shape, carved and numbered, lay ready on the ground. Only thus is it possible to account for the fact that the six layers of the first pīḍha roof of the mukhaśālā were set up within one month's time, and that the whole colossal temple complex with the surrounding walls and gate-temples was finished within a little over twelve years. Even then such a feat appears like a miracle, considering that almost no square inch of all the structures was left without rich sculptural work, either figural or ornamental.

Whether the artists and workmen were organised into fraternities or corporations similar to those of medieval Cathedal builders in Europe, which were based on a religious and technical initiation, with clearly defined degrees, common rules for training and a discipline, that imposed on its members absolute secrecy of professsional knowledge, is not revealed by this text. But that they constituted a sort of professional community can be inferred from the fact that Gadādhara Mahāpatra, the chief executive Architect, had the title of "Śilpi Nāyaka" : "hereditary Leader of the Śilpīs," and Gaṅgā Mahāpatra, head of the sculptors, was called "Pathuriā Paryaṅga Kula Nāyaka," "Head of the sculptor community of Paryaṅga (district)."

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The perfect harmony in the style of their collective work also is an indication that they had a common training and worked according to a common conception, which gave them their particular manner of artistic realisation, so characteristic for all Koṇārka sculpture. It is quite revealing in this respect, that the Sthapatis, whom Narasiṁha's father-in-law, the Pāṇḍya Rāja had sent from the South, were out of tune with the rest of the local artisans. The Sūtradhara was not satisfied with their performance and wanted to dismiss them, but in deference to Rājā Narasiṁha, who could not in such a way affront his father-in-law, they were kept. Henceforth, however, they were allowed to do only ornamental work. They were kept apart as a separate team and lodged in a separate camp.

It is worth remembering that at no period of great traditional art was there, anywere in the world, any such cult of the artist's personality as we have today. All that mattered was the great collective work of art, and even that was not considered art, but a tribute of devotion by an entire community to a divinity or a common ideal. Therefore no effort and no expense was deemed too great to make such a monument as splendid and grand as human means and artistry would allow. Beauty however was not an end in itself, nor was it meant for merely aesthetic enjoyment. Besides dedication to a divinity it had an eminently practical, unifying purpose. Since the temple responded to and expressed common thoughts and aspirations, it became a powerful rallying force, a centre of convergence, which embodied the spirit of a community and furnished the community with spiritual nourishment. Devotion to a common creed or ideal could leave no room for personal pride, and that is the reason why the authors of such superb monuments as the Stupa of Borobudur or the temples of Angkor did not sign their names. The names of most builders of the Gothic cathedrals are similarly unknown. Only a few had their names engraved in inconspicuous places on their buildings and this is how art historians could in certain cases retrace their lives and activities. Of none however could a biography be written, as of the artists of the Renaissance, when individual achievement had become the supreme standard.

Of the great architects who built Koṇārka only two names, very much distorted, had come down to modern times. It is only by the discovery of the Baya Cakaḍā, that now, after 700 years, we come to know the correct names and the personalities of these builders. Their names were not put down in order to convey them to posterity, but simply for the practical purpose of registering their contracts, their orders and the remuneration they received for each single piece of work. In this way a document, whose value goes far beyond its original purpose, has come down to us, giving circumstantial insights into the work processes of long forgotten times and the human beings who devised and used them. It is a unique record of its kind, for neither in India nor in Europe has anything nearly so detailed been found for any of the other great monuments of medieval times. The book mentions the names not only of the leading artists but of all other categories of collaborators—religious leaders and lay experts, supervisors and controllers, technical specialists in every department and even ordinary workmen. From these records it is possible to form a vivid picture of their personalities, their character and their achievements, which at times appear almost beyond human capacity.

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Foremost among them all figures Sadāśiva Sāmantarāya Mahāpātra, who held the title of Sūtradhara–the Holder of the thread. Although he may have received from Rājā Narasiṁka Deva his inspiration for building the temple in form of the Sun God's chariot, this title indicates that he was the actual creator and designer of all the buildings. He figures throughout as the director and final authority on every point of the construction, down to the last detail. He also had the unique distinction of carving with his own hands the two most important images of the Sun God, the big standing image of Pūṣan for the western niśā–temple and the seated image of Mahabhāskara for the sanctum. Thus he proved to be as great a sculptor as he was an architect. He had at his side men who, to judge by their achievements, were almost equally great, and who mastered architecture and sculpture with the same ease and excellence. To mention only the most outstanding ones, they are : Gadhādara Mahāpātra, chief executive Architect, Gaṅgā Mahāpātra, Head of the śilpīs, Nārāyaṇa Mahāpātra, Master sculptor, and Viśvanātha Mahāpātra, specialist in royal scenes and portraits.

An untiring devotion, a sacred fire that never flagged must have animated all these men, without which the greatest technical skill and the most splendid organisation would not have been able to complete this gigantic monument in so short a time. The enthusiasm of the builders seems to have caught the entire population, because gifts of money, cloth and jewellery, grains and other food stores, milch cows and coconuts, timber, bamboo, ropes, iron ore, copper, borax etc. poured in from all sides. Stones, stone–cutters and sculptors were also sent by neighbouring Rājās, landlords, religious orders and associations.

Yet, towering above all, as the the inspirer and driving force behind this entire colossal enterprise, was Mahārājā Narasiṁha Deva I. All his love, all his personal wealth, all the booty he brought home from his victorious campaigns, were lavished on this temple. The Rājā kept himself constantly informed about the progress of the work and often inspected it. Whenever there was an important or critical phase of the building operations—a temple of such dimensions having never been built before in that region—he was personally present. His wish was that all edifices should be completed at a certain date, when Māgha Śukla saptamī, the Spring Festival and "birthday" of the Sun God would fall on a Sunday. On that auspicious day, at sunrise, he wanted the first pūjā to be performed inside the temple. Therefore the consecration ceremonies of all the temples and images, especially of the Pūjā image in the main shrine, had to be accomplished before that date. We may see later that a certain haste in finishing the temples for the appointed date may finally have impaired their solidity. In spite of tremendous difficulties that arose at the moment of setting up the kalaśa on top of the main temple, all the consecration ceremonies were completed in proper time. They lasted one full month, and after a nightlong recitation of vedic mantras, the first regular pūjā took place on the morning of the Māgha śukla saptamī day, on a Sunday.

There are two silent witnesses of the consecration in front of the ruined temple, by the side of the musicians' platform. Two yupas* rammed in the ground testify to the fact that the completed temple was duly consecrated and given over to worship (Pl. 108). The Purohita

* Small square stone-posts.

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Sarvasva, an Orissan text dealing especially with consecration ceremonies says: "The yūpa is the witness of the consecration of the temple and the Yajamāna (patron) should set it up with his own hands." Many of the old Orissan temples, wells and tanks preserve their yūpas and the Koṇārka temple is no exception. The two yūpas between the mukhaśālā and the nāṭa-maṇḍapa mark the place where the sacrificial hall was set up during the pratiṣṭhā ceremonies.

Manuscript No. 4

PADMAKEŚARA DEULA KARMĀŃGĪ

This is a manual of the ritual that used to be performed in the Padmakeśara temple of Koṇārka. It gives detailed instructions for all the pūjās and ceremonies, for the functions of the various officiating priests (pujārīs) and for the innumerable varieties of food offerings that had to be prepared in the kitchen and presented to the divinities.

This ritual has a number of features which are common to all temples. But we are reproducing only those which are particular and characteristic for the worship of the Sun God. Since the text is very long and is limited to the technical aspects of the ritual, saying nothing whatsoever about the underlying doctrine, it was not deemed necessary to reproduce it in full. Only as much as will help to understand the use of the various shrines and to visualize the pageantry that once animated the now derelict temples is presented here in a condensed form.

All these texts have been annotated and commented upon with the help of extracts from the following published and unpublished sources :

1. *Sūrya Tantra* or *Sūrya Tattva Vistāra* (unpublished)
   In the form of a dialogue between Śiva and Pārvatī it expounds the tāntric conception of the Sun God and gives the exact description of the fundamental Sūrya yantra which should be used by the devotees for worship and meditation. (See p. 212)

2. *Maṇḍala Sarvasva* (published by the Puruṣottama Press in Purī in 1912)
   A collection of yantras, among which were found those underlying the construction of the vimāna and the jagamohana of the Sūrya temple, the nāṭamandira and the pedestal of the pūjā image of Mahabhāskara in the central shrine of Koṇārka.

3. *Śilpasāriṇī* (unpublished)
   An excellent theoretical, technical treatise on Orissan architecture, which describes, under the generic name of Mahāpraśasta type of temple and mukhaśālā, a groundplan and an elevation corresponding exactly to that of the Koṇārka temple. In its precision and detail, this analysis surpasses our survey report.

4. *Mādalā Pāñji* (unpublished)
   The chronicle of the Jagannātha temple in Purī, of which some entries have

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been quoted at the beginning and other parts of the Introduction to this work. Others will be found in the Appendices.

5. *Saudhikāgama* (unpublished)

A fundamental, comprehensive tāntric treatise on the architecture of temples and towns, bridges, wells and forts, on sculpture and iconography, on dhyānas, yantras and pañjaras (compositional diagrams) of all types of images. It is an encyclopaedic work that includes not only architecture and sculpture of medieval Orissa, but also that of cave temples in Western India.

12. PROBLEMS REGARDING THE LATER HISTORY OF THE TEMPLE.

How long the intense worship and the glamorous ritual of the Sun temple described in the Padmakeśara Deula Karmāṅgī continued is not exactly known. The colophon at the end of this text says :

> "These were the rulings (nīti karmāṅgī) set down for the worship in the Padmakeśara temple. But for twelve years the Sevakas did not do their duty (bhoga karmāṅgi) properly. Thus gradually the Sun God left this temple."

It is not known when this entry was made, nor to what particular time the remark refers to. Only one thing seems to be clear—the gradual dereliction of the temple duties by the pujārīs. Was the worship of the Sun God slowly superseded by other creeds and did it therefore lack proper patronage ? Was the temple too distant from inhabited centres to provide sufficient means for its maintenance ? Was it even then visited only once a year on the great Māgha saptamī festival, and if so, was there perhaps no incentive for conscientious worship throughout the rest of the year ? Or had the temple really been damaged and desecrated by the Muslim invaders in the 16th century ?

The *Mādalā Pāñji* in fascicle No. 7 of Mukunda Deva (1551–1568 A. D. ?) tells the story of the invasion of Orissa in 1568 or 69 A. D. by the Muslims of Bengal under Kālāpāhāḍ, a Hindu renegade. It says that Kālāpāhāḍ was out to rob the Padmakeśara temple of its treasures. But the Dalabeherā of Kilā Bayālisbāṭi was informed of his approach and in order to save the lotus emblem with rubies on top of the temple, ordered it to be removed. He took it to his house and later deposited it in the Puruṣottama temple. When Kālāpāhāḍ saw that the Padma was no longer there, he suspected one of his own chieftains, Bairam Khan, of having stolen it, and to punish him, chopped off his head. He also hacked off the hands of the Ādityas on the outer walls—meaning most probably the Pārśva devatās in the niśā-temples—and then went away. Another report says that he raided and destroyed the Ṭhākurāṇī temple. If these reports were true, worship in the temple would have ceased before the collapse of the vimāna, which evidently was then still standing. But, not only does this report have the flavour of a popular cock-and-bull story, but it seems also to be contradicted by Abul Faz'l account in the Ain-i-Akbari. His visit to the temple must have taken place sometime after 1570 A. D.,

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and from his admiring description it appears that the temple was still undamaged and in worship. In those days it was not customary to travel far distances to visit ruins just for the sake of their artistic beauty. Abul Faz'l also mentions six other temples within the enclosure and twenty-two more temples in the vicinity, which also suggests that the whole temple area was then still intact.

In the Mādalā Pāñji there is another entry which also seems to confirm that the temple was still in worship even in the early 17th century. Fascicle No. 3 of Puruṣottama Deva of the Khurda Dynasty (1607–1621 A. D.) states :

"When he (Puruṣottama Deva) became Rājā, he gave orders to Iśāna Karaṇa to take full measurements (i.e. make a survey) of the Puruṣottama Baḍa Deula, the Ekāmra Paramaliṅga Deula and the Padmakeśara Deula, and also to report on the expenditure for worship and on the contents of their store-rooms and treasuries. After giving this order, he took the name of second Narasiṁha Deva."*

It is only in a later entry of the Mādalā Pāñji, in fascicle No. 6 of Rājā Narasiṁha (1621–1647 A. D.), son of Rājā Puruṣottama that we are informed about the catastrophe that ruined the temple.

> "In the 9th aṅka of the reign of this Rājā (Narasiṁha) the big lion, the Gajasiṁha on the eastern side of the Padmakeśara temple fell down towards the east, together with the eastern temple wall. At this time the hands of the pūjā image were broken, whereupon the entire country fell into great affliction. Each year, on Māgha śukla saptamī, two pieces of cloth, one phuṭṭa and one puharani used to be sent to Koṇārka for the decoration of the processional chariot. This time the man in charge received orders not to send the cloths. The puharani was instead sent to the Sūrya pūjā maṇḍapa (in the Puruṣottama temple) and the paṭani (phuṭṭa) was given to the Rupāsa Dalabeherā. The Rāja also gave order to the Brahmarabara to deposit the two vijaya pratimās (portable images) in the storeroom of the Puruṣottama temple." **

This report, which appears more serious and trustworhy, also shows that the temple tower could not have broken down before the end of the twenties in the 17th century, and that the temple remained, at least officially in worship until that time. Otherwise it is unlikely that annual gifts of special clothes would have been offered to it, and that its collapse would have plunged the entire country into grief.

The reason for the ruin of the temple is perhaps to be found in the above-mentioned colophon of the *Karmāṅgi*, which says that the pujārīs had become negligent and no longer

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* This is the survey to which we owe our Manuscript No. I on the Architecture.

** These portable images are still there and are taken out in procession inside the compound of the Jagannātha temple once a year on Māgha śukla saptamī. This is known as the Koṇārka Ratha yātrā. See Pl. 109.

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conscientiously fulfilled their duties. They may therefore also have neglected to keep the temple in proper repair. The upper half of the vimāna, being most exposed to storm and rain, had been protected by the Sūtradhara with a coating of lime and especially needed regular maintenance, to prevent stones from getting loose, by which cracks could develop and water infiltrate and disintegrate the wall-work. It was this solid stone mass that maintained the balance of the huge lion on the eastern side, pressing down its tenon and thus keeping it in position When that mass no longer held together solidly, the tremendous weight of the projecting part of the lion may well have been enough to tilt and capsize the whole figure.* This would inevitably have caused the collapse of the entire upper structure. It is significant in this respect, that only the eastern and the northern walls came down at that time, while the southern and the western wall remained upright to a height of about 120 feet until the middle of the 19th century, as attested by Fergusson and his drawing. Had destruction been caused by enemy action, it would most probably not have started by the eastern wall protected by the mukhaśālā, but by some of the outer walls.

In the Journal of the Asiatic Society of Bengal, New Series IV, 1908, Manmohan Chakravarti had published another report, said to have been found in the Mādalā Pāñji, according to which not Rājā Puruṣottama Deva (1607–21 A. D.) but his son Rājā Narasiṁha Deva (1621–1647 A. D.) made the above-mentioned survey of the Koṇārka temple, in about 1628 A. D. This survey is stated to have been made after the temple had been damaged and desecrated by the troops of Bakhar Khan, the Muslim Subedar of Orissa. Chakravarti's report, whose source we have not been able to find,** has since been accepted as valid by most scholars, such as Kripāsindhu Miśra, Bishan Svarup, Debala Mitra and others. But the colophon of our text on the architecture of the temple clearly states that it is a copy of the survey report made in the 5th aṅka of Rāja Puruṣottama Deva and not of Rājā Narasiṁha Deva. Also the entry in the Mādalā Pāñji quoted before confirms that the survey was made by Puruṣottama Deva, together with that of the two other big temples of his country. During his reign the temple appears to have been neither desecrated nor ruined, for a ruined temple would have had neither expenditure on worship nor contents in its storerooms or treasuries. Moreover it would seem pointless and very unlikely, that a survey be made of a temple damaged by enemy action, because archaeological surveys of ruined temples were unknown in those times.

We have seen in the fascicle of Narasiṁha Deva (1621–1647 A. D.) that it is the collapse of the temple and not the survey which is reported, and this is attributed not to enemy action, but to the fall of the big Gajasiṁha of the eastern front, owing to the disintegration of the upper part of the śikhara. This version seeems to be confirmed by the aspect the ruins had when they were first discovered. On the other hand, the fascicle of Puruṣottama Deva states that this Rājā, after making the survey of the three temples, proudly assumed, or was honoured be the people with the title of "second Narasiṁha". The title assumed by the father

* Compare Baya Cakaḍā, Leaf XIX and XX. See Pl. 2, 6 and 46.

** It was published in JASB, June 1908, pp. 322—Appendix-C.

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and the name of the son, both being Narasiṁha, may easily have been confused, causing a misapprehension about which was the Rājā who ordered the survey.

Another fact, revealed by certain entries in the Baya Cakaḍā, should also be taken into consideration. Rājā Narasiṁha I, the builder of the temple, wished it to be consecrated when Māgha śukla saptamī, the great festival of the Sun God, would fall on a Sunday. This could happen only once in seven years. The date seems to have been fairly near, because the Rājā again and again urged the Sūtradhara to speed up the work. The king's impatience is first recorded after the big lion was installed on the eastern front on the 14th day of Māgha śukla pakṣa in the 12th aṅka. The ceiling of the śikhara then had to be closed,* and the Sūtradhara, who always planned his work most carefully and systematically wanted to complete this task on the following Vaiśākha kṛṣṇa aṣṭamī. The Rājā, however, insisted on closing the ceiling about a fortnight earlier, on Caitra śukla navamī. It is not mentioned that the Sūtradhara refused to comply, but this can be inferred from the fact that he sent an urgent letter to the Mahāśrama and that another man was brought from Ekāmra for this particular work.** This man apparently finished the task on the appointed day, for he was rewarded with silken cloth and with three māḍha, and the consecration of the ceilling was duly performed. But later, when the beki was set up on the roof of the śikhara, symptoms of instability became evident. The stones of the beki would not stand firm, were twice re-set, and finally had to be consolidated with metal-cramps, a necessity which apparently had not been foreseen.*** Another instance of the Rājā's impatience appeared when he visited the site in the 14th aṅka and reproached the assembled workers that they had not yet finished the beki of the temple, after nine years of work. He solemnly declared the 10th day of the 10th month of the 10th year a final, inalterable deadline for completion of of the garbha.****

Later when the āmalaka with the khapuri had been fixed and the time came for setting the kalaśa of the main temple, still worse difficulties arose, which drove the Sūtradhara in desperation to abandon the work. Only the providential intervention of his son, Dharma Mahāpātra, saved the situation and averted a catastrophe. Dharma Mahāpātra quickly decided to make a new kalaśa that could be fixed into the khapuri with an egārupaṭṭikā, a kind of pedestal that gave it support. *****

If a man like the Sūtradhara Sadāśiva Sāmantarāya Mahāpātra, who had proved his outstanding knowledge and ability in every line of work, was at the last moment not able to set the kalaśa, one cannot help suspecting that something had gone wrong with the understructure. Perhaps as a result of forced, undue haste it had not been made solid enough or had not been allowed sufficient time to settle properly and find its own balance.

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* See App. No. I
** See Baya Cakaḍā, Leaf XXI, 5-11.
*** See Baya Cakaḍā, Leaf XXXVI, 7-8 and Leaf XXXVII, 2
**** See Baya Baya Cakaḍā, Leaf XXXIX, 8
***** See Baya Cakaḍā, Leaf L, LI, LII, and App. No. II

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Again in a later entry we are informed that the uppermost part of the śikhara, the most exposed part of the big temple was eventually plastered over with lime. * What could have induced the Sūtradhara to disfigure his exquisite temple in this way, except fear, that its uppermost part might not be strong enough long to withstand wind and weather and a desire to consolidate it in whatever way was possible at that stage of the work ?

Also when the Ṭhākurāṇī temple was under construction the Rāja pressed to speed up the work. No sooner had the wallwork been finished, around Holi of the 17th aṅka, than he sent an order demanding completion of the entire śikhara up to the covering roof by the 13th day of Jyeṣṭha śukla pakṣa, i. e. within three months, a very short time indeed.** Actually it was completed only several months later. Also when the Nāṭamandira was under construction, the Maharājā intervened with an order, that it should be completed within a year from then.***

It has also to be noted that while in the early years, construction work was always stopped and the workmen sent home during the rainy season, later no such leave was given and work continued throughout the monsoon time. This certainly could not be particularly conducive to solidity and stability of the buildings.

In conclusion we may say, that after studying the texts presented in this volume it appears likely that a certain haste in finishing the work may have impaired the cohesion and strength of the upper parts of these temples, and may, together with neglect in their maintenance, have caused their final collapse. This is just another hypothesis, though not the least plausible one. The precise causes for the downfall of this majestic monument will perhaps never be known with absolute certainty.

Yet one task of the utmost importance remains for the present generation—an urgent duty towards this great tragedy-stricken temple : the rescue of all the precious pieces of sculptured stone that now lie strewn in the jungle, where they were mercilessly thrown during the first restorations early in this century. These must at all costs be salvaged as soon as possible to await the happy moment when they may be reintegrated in their proper places on the monuments. The Archaeological Survey of India has made a laudable beginning by building a Museum and collecting under its roof a good number of loose sculptures. But these, being mostly figure-sculptures, cannot be returned to their proper places in the buildings, unless the architectural pieces to which they belong are first reintegrated.

Such a restoration would be perfectly possible today, at least as far as the mukhaśālā is concerned. Hundreds of beaulifully moulded and carved pieces still existent could, in our opinion, be inserted into the blank ashlar walls now disfiguring the monument, into the places where they belong. Thus the original appearance of the monument could to a great extent be restored. It would also be possible, in the opinion of traditional sthapatis in Orissa, to

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* See Baya Cakaḍā, Leaf LX, 9.
** See Baya Cakaḍā. Leaf XLIX, 7
*** See Baya Cakaḍā, Leaf XXXV, 10

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empty the mukhaśālā of its stone and rubble filling, whose pressure now constitutes a serious threat to the outer walls. For this purpose one of the portals should be opened and vertical trenches cut through the thick wall lining in the interior, leaving only parts of it as supporting props for the roof. The mukhaśālā and also the garbhagṛha would then again become accessible in the normal way. The front portal could even be restored to approximately its original appearance with the Navagraha stone over it and with the arch, of which large pieces are lying in the compound, and more might be found, once the jungle were properly combed.

Humanity has a duty to preserve this monument, one of the very great architectural treasures not of India alone, but of the whole world, a precious heritage for present as well as for future generations. We therefore would like to urge the Government of India and also to appeal to world opinion and world Organisations such as the UNESCO, to leave no stone unturned—in the literal and in the figurative sense—in order to reconstruct this unique monument as far as possible and to rescue it from final destruction, before it is too late.

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THE ARCHITECTURE
OF THE
SUN TEMPLE OF KOṆĀRKA
PADMAKEŚARA DEUḶA

PALM LEAF MANUSCRIPT OF 23 LEAVES WITH A TECHNICAL DESCRIPTION OF THE TEMPLE

Illustrated with designs of the entire structure and its various parts, with groundplans and yantras.

Found in the houses of Jagannātha Sāhu and Karuṇākara Sāhu in Bāṅgurigāṅ.

Written in antiquated Oriya, in Karaṇi script, collated with variant readings found in the records of the Mādalā Pāñji, the Chronicle of the Jagannātha temple in Purī.

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This Report on a Survey made in the early 17. Century on behalf of Rājā Puruṣottama Deva of the Khurda dynasty is for the greater part written in the form of short summary notes explaining the illustrations. Measurements given are not always reliable, either because of obvious mistakes of the copyists or because of doubtful readings. The essential value of this document lies in the detailed technical description of the whole structure, especially of those parts that are no longer in existence and are shown in the designs, and in the revelation of the various symbolical yantras that formed the foundation of these monuments.

The text of the manuscript is placed within square brackets.

The description of the drawings, the variant readings and additions of the Mādalā Pañji are in italics.

A indicates the front side of the palm leaf

B indicates the reverse side of the palm leaf

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LEAF 1 A

Invocation :

[Homage to Gaṇeśa, Remover of obstacles, Son born to Girijā (Pārvatī, the Mountain-born), do save us from all obstructions : Homage to Thee, Lord of the Gaṇas.]

[Śrī Śubham Astu !]

Writing : [I am recording the measurements of all parts of the temple to the great Sun God and am describing their construction : pīṭha, barāṇḍi, jāṅgha, bandhanā, lower barāṇḍi, bāḍa, jāṅgha, bandhanā, rekhā, pīḍha, and other things, all together 150 parts,[1] The sub-divisions of the base (tala) are 85 in all. The wall of the śikhara from the berm to the meḷāṇa has exactly 53 parts, of which I am writing the details. I am giving the measurements of their extension in hasta and yava.*]

LEAF 2-4 A *Sketch of the three buildings : vimāna, mukhaśālā, nāṭamaṇḍapa with the Aruṇa-stambha in between.*

LEAF 2 A *Design of the uppermost part of the vimāna with āmalakī and kalaśa. kalaśas of the mukhaśālā and nāṭamaṇḍapa.*

Inscription by their side : [Measurements of the śikhara of the Padmakeśara temple.] [Mukhaśālā deuḷa.]

LEAF 3 A *Design of lower part of śikhara with roofs of the niśā-temples, pīḍha-roofs of mukhaśālā and nāṭamaṇḍapa.*

Inscription near the latter (in the wrong place) : [Jagamohana maṇḍapa.]

LEAF 4 A *Design of lower parts, bases of all three structures and the Aruṇa-stambha (Aruṇa-pillar).*

LEAF 5 A
LEAF 6 A
PL. 1 (a) *Groundplan of the main temple, the mukhaśālā and the nāṭamaṇḍapa.*

The whole ground is divided across into 40 strips. Lengthwise the area is divided into 6 parts. Inscription by the side : [Groundplan in length and breadth (bhūmi yantra vasāṇa, dīrgha, prastha), gate-temple east with a passage (gumuṭa).] Further inscriptions : [This is the garbhagṛha 5

* The method of counting the parts of an architecture is a process of addition which has been exemplified by modern Sthapatis in the following way : First the vertical sequence of all architectural elements with a fair amount of detail is taken, from and including the four layers of the foundations up to the finial, and afterwards the horizontal sequence, starting from the back centre in the west to the front centre, the portal in the east. This latter counting is taken above the pañcakarma, at the height of the lower jāṅgha. Last come subdivisions (upāṅgas) that could not be included in either of these categories.

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(parts), this is the mukhaśālā 6 (parts), nāṭamandira 5 (parts).] The temple proper reaches from the 9th to the 19th cross-line, the mukhaśālā from the 20th to the 30th cross-line and the nāṭamandira from the 34th to the 40th cross-line. In a table by the side the width of every section of the buildings is given in numbers, which, if they indicate units of measurement, presuppose that on the plan the width should have been divided according to the same measure as the length, so as to form a grid of regular squares, on which the outlay of all the structures would have been based. This seems to be indicated by the numbers in oblique lines, which divide each vertical section into three. According to the table the 9th section has 4 units in width, the 10th section has 8 units, the 11th and 12th sections have 10 units, the 13th, 14th, 15th and 16th sections have 12 units, the 17th and 18th have 10 units and the 19th has $8\frac{1}{2}$ units, This last one represents the passage from the main shrine to the mukhaśālā and is called gaiṇṭhāla. In the mukhaśālā the 20th and 21st sections have 10 units, the 22nd has 12 units, the 23rd and 24th sections have 14 units, the 25th 12 units, the 26th and 27th have 10 units, the 28th and 29th have 8 units each, and the 30th and 31st have both $3\frac{1}{2}$ units.* The 32nd has the inscription : [beḍha (pathway)] and the 33rd reads : [khamba=the Aruṇa-pillar).] The nāṭamandira begins from the 34th section with 4 units, the 35th section has 6 units, the 36th, 37th and 38th sections have 8 units, the 39th 6 units and the 40th 4 units. In the north-western corner of this area is a square with the inscription : [Śāmba-pīṭha=temple to Śāmba)] Then : [3 yava (or hasta) vistāra, 1 yava 3 dhāna prastha] which so far has remained unintelligible. Small inscription on the border : [hasta ?]

(b) *Design : Disposition of the 24 wheels of the basement on their cross-axles*, which shows their relative distance from the central axis.

Inscription on the side : [plan of the axles (ara-yantra), 12 axles.] and : [wheel of constellations (rāśi-cakra).] Each pair of wheels is dedicated to one of the twelve constellations, and their names with their symbols are inscribed by the side of the respective wheels, beginning with Aries (meṣa) at the back and ending with Pisces (mīna) at the front-wheel.**

(c) *Diagram of the operations made with the śaṅku and the thread*, in order to determine the orientation of the temple, and the cross of the eight space-

* The lay-out of temple-plans according to units of measurement is very claborately described in an unpublished practical manual of Architecture from Orissa, called the Śilpasāriṇī. Here most probably, the copyist was not conversant with this method, and therefore drew the groundplan in a defective way. The proportions and outlines given do not tally with those of the actual building. For the correct design as given in the Śilpasāriṇī see *Appendix No. 2.*

** See Fig. 15 in App. No. 18.

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directions with their respective names. Inscription : [This is the digasāriṇī, East, West, North, South]. Around the cross are the names of the Dikpālas and space-directions alternately : [Īśāna, East, Agni, South, Niṛti, West, Vāyu, North.]*

LEAF 7 A }
LEAF 8 A }
PL. 1

Symbolical yantras underlying the temple, the mukhaśālā and the nāṭamandira.

(a) Bhāskara bhadra yantra (written along the side.)

Yantra underlying the garbhagṛha : On the rectangle in the centre an eight-petalled lotus with the inscription : [OM Bhāskarāya namaḥ ! piṇḍi, napuṁsaka pīṭha.] This is the pedestal of the image within the square of the garbhagṛha. The garbhagṛha again is enclosed within a bhūpura, which approximates the ground plan of the temple with the niśā-temples attached to three sides. The open space is marked : [garbha.] On the eastern side of the bhūpura a hexagram within a circle is inscribed : [OM Aruṇāya namaha !] A hexagram on the northern side is inscribed : [OM Haridaśvāya namaha !] Another on the western side is inscribed : [OM Pūṣanāya namaha !] and one on the southern side : [OM Mitrāya namaha !] Inscriptions outside the yantra : [Niśā, rāhā, koṇaka,] indicating the position of these parts of the architecture. Inside near the passage to the mukhaśālā is written [Dwārapāla (Door-guardian).]

(b) Sūrya pañcābja maṇḍala (written along the side).

Yantra underlying the mukhaśālā. It has five lotuses in the middle, four in a square and one in the centre. Near the central lotus is the inscription [OM namo Bhāskarāya.]** The four surrounding lotuses are inscribed with the names of Gaṇeśa, Śiva, Viṣṇu, and Ambikā in the form of invocations : [Gaṇeśāya !] [OM namaha Śivāya !] [Viṣṇave namaha !] [OM Hrim Ambikāi !]. They have small squares in their centres and thus would indicate, that they also mark the position of the four pillars that supported the roof of the mukhaśālā. The open space is marked [garbha.] The maṇḍala is enclosed in a complicated bhūpura whose four corners are each occupied by two small circles. These most probably are the Kanyā-piṇḍis for the Śaktis of Sūrya, or for the Sūrya, Gaṇas (Lords of the months). But in either case they should be twelve instead of eight.***The sides of the

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* The Dikpālas stand for the intermediate directions : north-east, south-east, south-west and north-west respectively.

** Should be Ravi, see Leaf No. XLIV in the Baya Cakaḍā. The Mahābhāskara form of Sūrya can only be placed in the garbhagṛha and not in the mukhaśālā.

*** Both these yantras are not quite correctly drawn. The exact drawings and their meanings are given in Maṇḍalasarvasva, see *App. No.* 3.

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bhūpura are open and two carry the inscription : [Dvāra (door).] The eastern projection of the mukhaśālā is inscribed : [Toraṇa (portal).] The pathway is inscribed : [Yojaka (junction or joining path).] In a square inside this path the place of the Aruṇapillar is marked by a small square.

(c) Nāṭamaṇḍapa graha-abja-maṇḍala (Lotus-maṇḍala of the nine planets). A square divided by cross-lines into nine fields, enclosed within an outer plain square, which is inscribed : [varta, (surrounding path) 16 khamba (16 pillars).] The crossing of the lines and the corners are numbered : [1-16,] evidently indicating the pillars of the building. Empty spaces are inscribed : [garbha.] The squares are the houses of the planets, at the same time the whole yantra corresponds exactly to the architectural plan of the building.*

LEAF 9 A
PL. 1

(a) Outline of temple and mukhaśālā divided into 18 strips across,** with oblique lines pointing towards the position of the 12 wheels (see App. 18) [173] written at the end.

(b) *Elevation of the base* (pīṭha), showing twelve wheels. Above is the inscription : [In this Saura-bhadra-pīṭha,*** there are twelve pairs of wheels, six pairs in the śikhara, one pair in the gaiṇṭhāḷa (place of junction between śikhara and mukhaśālā)**** and five pairs in the mukhaśālā. These are placed in 18 divisions.] (evidently the 18 divisions shown on the plan by the side.)

(c) *Two profiles of the pedestal* (*piṇḍi-bhāga*) for the image in the garbha-gṛha. Inscription above the wheels of the previous design : [Ratnasiṁhāsana niṃaya (description of the jewel-lion-throne)] and : [6 bhāga piṇḍi, garbha nyāsa vicāra uca (elevation or profile in 6 parts of the pedestal in the garbha).]

The divisions of the pedestal which here are numbered from 1–6 are in reality only 4, which of course produce a different outline.

(d) *Mahāsūrya cakra for the pedestal.* In the centre a lotus with eight inner petals bearing the first letters of the names of the eight aspects of Sūrya : [Āditya, Bhāskara, Bhānu, Ravi, Sūrya, Divākara, Mārtaṇḍa, Tapana,] and with twelve outer petals bearing the initials of the names

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* *See App. No. 4*

** These parts occupied 20 strips in the previous groundplan.

*** Saurabhadrapīṭha stands here for Sarvatobhadrasamapīṭha, which is described in the Śilpasāriṇī as belonging to the Mahāpraśasta garbha and mukhaśālā. See *App. No. 2, a*

**** Gaiṇṭhāḷa derived from granthi which is the knot binding bride and bridegroom together at the time of marriage. The temple is often figured as the bridegroom, while the mukhaśālā is represented as the bride.

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of the 12 Ādityas : [Aruṇa, Sūrya, Vedāṅga, Bhānu, Rudra, Ravi, Gabhasti, Yama, Suvarṇaretas, Divākara, Mitra, Viṣṇu.] On the right side is the [Chāyā cakra, (lotus with hexagram inside a triangle)], on the left side is the [Māyā cakra (lotus within a diamond)]. Inscriptions inside : [This is the Mahāsūrya cakra, these are the piṇḍiyantras.]* Inscriptions outside : [Length and width of the piṇḍi. The garbha (shrine) in which is the pedestal (āsana) is a square of 21 hasta 4 yava.]

LEAVES 10-18 A — *Design of the elevation of temple and mukhaśālā.*

PL. 2

LEAF 10 A — *Kalaśa and Padma of the main temple.*

Inscription on the right side : [This kalaśa on the śikhara is of 12 parts.] Inscription on the left side : [Cumbaka lohā, dhvaja-padma.] Inscription by the side of the kalaśa-foot : [Egārupaṭṭika.**]

LEAF 11 A — *Design of the āmalaka and the beki.*

Inscription on the right side : [second part of the śikhara-cūla, six divisions,] then inside the respective parts : [beki, khapuri.]

LEAF 12 A — *Design of the upper part of the śikhara.*

Inscription on the right side : [third part, gaṇḍi.] Inscription on the left side : [rekha-bhūmi (flat layers composing the rekhaśikhara or gaṇḍi), alāśrī (āmalaka) of 13 round mouldings (baḷāprāyaka=resembling bangles). On the corner-parts (koṇakadeśa) there are five pairs (ten) bhūmis.]

LEAF 13 A — *Design of the middle part of the gaṇḍi with the big lion projecting on the east-side.* Inscription to the right : [fourth part, muda-bhāga (ceiling part), muda-siṁha (ceiling lion).] Inscription to the left : [At this place there is the inner ceiling (bhitara muda) inside the gaṇḍi.]

Design of the upper part of the mukhaśālā with śrīpiṇḍi, āmalaka and kalaśa.

LEAF 14 A — *Kalaśa of the niśā-temple, lower part of gaṇḍi with vajramuṇḍi and the projecting rekha-deuḷa.*

Inscription to the right : [fifth part of the garbhaka, vajramuṇḍi.] to the left of the gaṇḍi : [This is the gaiṇṭhāḷa-muda (ceiling of joining place which in reality is below.)]

Upper two pīḍha roofs of the mukhaśālā with beki and śrīpiṇḍi.

The second pīḍhas of the mukhaśālā are numbered : [1-6.]

LEAF 15 A — *Pīḍha roofs of the niśā-temples, base of śikhara.*

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* See Introduction : Iconography of the Sungod and *Appendix No. 5*

** Cumbaka lohā should be written near the egārupaṭṭika. See *Appendix No. 11*

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Inscription to the right : [sixth part.] In the middle : [bāḍānta (end of the wall).] The lowest koṇaka bhūmis on the right side are numbered : [1-10.]

Lowest pīḍha of the mukhaśālā and garbha-meḷāṇa. The pīḍhas are numbered : [1-6.]

LEAF 16 A *Wall-portion of the main temple and the mukhaśālā.*

Inscription to the right : [seventh part] Names of all elements are inscribed along the inner wall of the garbha, from below upwards : [pāda, khura, kumbha, kaṇi, vasanta, koṇaka, pāda, dori, paṭṭa, dori, paṭṭa.]

LEAF 17 A *Lotus-plinth of the temple (padmapṛṣṭha) and upper baraṇḍi of the basement (pīṭha).*

Inscription : [eighth part, jāṅgha.]

LEAF 18 A *Base below both structures with wheels and horses.*

All elements inscribed with their names. Along the front : [pāda, kumbha-gṛha, pāda, dori.] Inside the first wheel : [pai, ara, tumba, āḍa ara.] Between the two last wheels : [mithuna.] On the plinth : [khura pāda (4 times), gaja-pīṭha (5 times), height 7 yava, paṭṭi 2 yava.]

(On the reverse side the leaves 1-4 are blank)

LEAF 5 B PL. 3 (a) *Design of a pillar capital for supporting the bāṅkapaṭi* (arch above the doorway)*

Then the inscription : [Śrī Śubham astu !] and the design of a small lotus-flower. ❀

Writting : In the Biṣe (District) of Rupāsa the temple is built in the Padmatoḷā kṣetra. The compound inside the wall measures from East to West 558 hasta 3 yava, and from South to North 348 hasts 8 yava. The outer compound-wall has 571 hasta 4 yava from East to West and 360 hasta width from South to North.** The bhadra-pīṭha (base of temple and mukhaśālā) on which stands the Ratha-deuḷa (Temple in form of a chariot) is 134 kāṭhi from East to West, and 87 kāṭhi form South to North.]

PL. 3 PL. 46 (b) *Schematic design of the inner construction of the śikhara with the inset lion-figure.*

Writing to the right : [This is the diagram of the inner construction of the śikhara (śikhara madhya yantra), the system of roofing the garbha

* Most probably belonging to the pillar-design on Leaf 16 B.

** Measurements tallying with those given by M. M. Ganguli in his book : Orissa and her Remains, p. 442 as 857′×540′ for the compound wall and as 32′ 10″ square for the interior of the garbha-gṛha.

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(garbha muda pramāṇa), the disposition of the horizontal tenon inside the wall (āḍa ṣaṅku vicāra).]

Writing inside the right triangle : [28 hasta.] Inside the left triangle : [10 parts (most probably referring to the parts of the koṇaka)]

Writing outside the left triangle, above : [ceiling] at the beki : (beki ratna muda], below : [ceiling of the garbha behind the rampant lion (uḍā siṁha garbha muda). This garbha-muda is at a height of 93 hasta, including the wall-portion. The tower (garbha-gaṇḍi) above this first ceiling upto the covering stone (muṇḍi-baiṭhā) is of 58 hasta.*]

LEAF 6 B

(a) *Schematic design of the construction of the pīḍha-roofs of the mukhaśālā.*

PL. 3
PL. 66

Writing : [Measure and disposition of the pīḍha ceilings, (pīḍha muda pramāṇa). To the three pīḍhas there are two ceilings, five parts.] On one side the pīḍhas are numbered : [1-3,] and on the other side the parts including the straight walls are numbered : [1-5.] both from below upwards. The ceilings are inscribed : [muda, muda.] Then a writing in ciphers : [3+4=2] then : [(part) 1 is one guṇa less (uṇā) than the muda.**]

PL. 3

(b) *Diagram of the position of the pūjā-image pedestal inside the shrine.*

PL. 76-77

The pedestal is inscribed : [This is the throne of victory (vijaya-piṇḍi.)] The path for circumambulation is inscribed : [beḍha] and the empty space in front of the throne : [garbha], the place for the food-offerings : [ṭhā].

Writing by the side : [This is the description of the vijaya piṇḍi.] and further out : [This completes the always glorious diagrammatic representation (yantra vidhāna)].***

LEAF 7 B

This is the description of the Padmakeśara temple. These are the measurements given in kāṭhi, hasta, muṭhuṇi, yava, girā and baḍa kāṭhi. This Padmakeśara temple in Padmatoḷā gaṇḍa was built by the order of Rāja Lāṅgulā Narasiṁha Deva, on a flat land measuring 125 bighā.]

[Śrī Śubham Astu :]

After this the Introduction of Leaf 1 with the enumeration of all the parts of the temple is repeated once more and ends thus : [the cūḷa's height above the pīḍha is equal to 150 (or 120) hasta.]

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* Also this measure of altogether 151 hasta comes close to the estimated whole of the temple of 220 feet.

** This puzzle has so far remained unintelligible.

*** Here the front of the pedestal is set on the centre-line, where the two diagonals cross, whereas in reality it is set further back.

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PL. 3 *Small design of a battlement (kāṅgulā) of the compound-wall.*

Writings by the sides : [3 hasta] and : [Total 3707 (in number)]
Text : [The circumference of the compound-wall, going around from east to east is 3070 kāṭhi. From the level of the ground the wall with the battlement (meḍha-kāṅgulā) is 9 hasta[1] high and the line of kāṅgulās is of 3 hasta. The thickness of the wall at the base is of 10 parts of 18 aṅgula (15 hasta) in the middle (?) of 8 parts, equal to 12 hasta (?)][2]

[The eastern entrance gate (gumuṭa) is 28 hasta (high). In the West, at a distance of 105 (or 108) hasta there is the temple of Yogamāyā Siddhi Rāmacaṇḍī. There are gate-temples (gumuṭas) also in the North and the South. Around the Paramasūrya temple there are eight Caṇḍī and Mahādeva (temples).]

LEAF 8 B Writing : [Erected on a rectangular ground comprising both structures (mahābhūmi), the shrine (garbha) on a Mahāsūrya maṇḍala* (Bhāskara bhadra yantra) is a pañcaratha prāsāda (square shrine with five rathas), the length is (gap), the width is (gap), the mukhaśālā-jagamohana is in form of a bhadra (bhadrākṛti)** on a Saura pañcābja maṇḍala. It has four portals and four pillars on the bhadrākāra pīṭha. The length is (gap), the width is (gap). They stand on a sarvatobhadra samapīṭha.**

Writing : [The lowest layer of the basement (pīṭha) projects by 4 yava and its height is 8 girā. The elephant frieze (gajatarubandha) is between two strings of beads (guṇḍikā-beḍha) of 1 yava. After every two kāṭhi there is one vertical post (paṭi).*** These are $\frac{1}{2}$ yava deep, and between them are the elephant-friezes with elephants of 122 kinds.]

PL. 3 (a) *Design of the elephant-frieze*

PL. 10-12 Writing by the side : [5 yava=measure of the elephant, 8 yava= the elephant-socle (gajataru-pīṭha), $1\frac{1}{2}$ yava depth (the carving), two lines of bead-work (guṇḍikā beḍha or dhāra) of 1 yava each.]

PL. 3 (b) *Design of the pañcakarma.*

PL. 13 Writing : [The lower jāṅgha's (taḷajāṅgha) height is 2 hasta 3 yava 1 aṅgula. The pañcakarma is divided into seven equal parts : khura 2, kumbha 2, khāndi, dori, vasanta 3 parts, all together 7 parts. The pañcakarma's total height is 1 hasta 11 yava.]

Mādalā Pāñji. (1) 8 hasta 3 yava
(2) depth across the battlements

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* See descriptions of these maṇḍalas on Leaf 7 and 8 A and the *Appendix No. 3.*

** See explanations of these ground plans according to the Śilpasāriṇī in *Appendix No.* 2.

*** In reality intervals between the posts are extremely variable.

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PL. 3

(C) *Profile of the taḷabarāṇḍi*

13-16

[The taḷabarāṇḍi is high 2 hasta less 1 aṅgula and has three main divisions : base (paṭa) 1, niche (gṛha) 2 parts, frame (dori) 1, roof (cāla) 1, a crowning (pīṭhikā) having 4 parts, of which 3 are the roof (pṛṣṭha) ahd one part a kaṇi. All these add upto 7 parts, and the total height plus 2 khāndis is 1 hasta 10 yava.]

LEAF 9 B

PL. 3

(a) *Design of the horizontal string-course (pīṭha bandhanā) with writings by its side* : [*pāda, dora, paṭi.*]

PL. 17-18

Writing : [This string course is 8 yava high. The lowest band (pāda) is 2 yava, the roll-moulding (dorabaḷā) is 2 yava, the upper flat band (paṭṭi) 2 yava 3 girā. On the vertical insets (muhāṇṭa) are niches for female figures of 8 yava.]

PL. 21

(b) *Design of the upper jāṅgha, with inscriptions along one side* : [bandha, gṛha, cāla, khāndi,] and along the other side : [pāda 1,gṛha 2, pṛṣṭha cāla 3, gṛha, muda 4,] all from below upwards.

Writing : [Over this is the upper jāṅgha which has three parts :

Muhāṇṭi kāma garbha	—	8 yava
Taḷapīṭha barāṇḍi	—	10 yava
Kelibandha	—	6 yava
Total measurement	—	24 yava]

PL. 19-22

[There are Rājabandha and Yuddhabandha (Royal scenes and war-scenes), with chamfers of 2 yava. In this barāṇḍi of the upper jāṅgha with human figures measuring 2 hasta, the socle (muhāṇṭi) is 4 yava, the roll-moulding (baḷābandha) is 3 yava, the fretwork (rekha-jāli) 9 yava, Leaving the chamfers and the 2 yava wide pillars (dhāra) on the sides and the roof of those wall-niches (niśā-cāla-bharaṭi), the height of the sculpture in the mīddle of these śikharas is of 1 hasta 8 yava.]

PL. 3

(c) *Design of a spoke (sāla-ara)*

PL. 23-27

Writing : [full length 2 hasta 7 yava, 1 hasta below the middle and 1 hasta above. On two sides of the spoke-knot (araganṭhi) are triangular projecting edges (arapheṇa) of 2 yava, in the middle of the spoke-knot is a small image of 1 kāthi (kāṭhi pramāṇa mūrti).]

(d) *Design of a wheel, nave and linch-pin*

(e) *Design of a thin spoke (kāṭhi-ara)*

Writing : [triangular projection (ara-pheṇa), linch-pin (aṇakiḷi), lotus-nave (padmatumba). This is the great wheel with sixteen spokes measuring 7 hasta 9 (or 3) yava. On the felloe creeper-ornaments are applied between twin circular borders of 1 yava. The front diameter of

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the axle (akha-muhāṇṭi) is 6 yava 2 girā. The cakra-kaṇi (projecting edge) is of 2 yava. The diameter of the lotus-nave (padma-kaṇi-tumba) is 1 hasta 3 yava. The axle (akhacūli pharuāmuṇḍi) projects by 7 yava, and on its face an image is carved. The linch-pin (aṇakili) is of 8 yava. Made in this way there are 24 wheels. The stick-like spokes (kāṭhi-ara) are of 2 hasta 7 yava.][1]

LEAF 10 B

Writing : [The berm projects on all four sides of the temple in the shape of a Saura-bhadra-pīṭha,* less in some parts and more in others. Below the śikhara the berm projects by 8 hasta 7 yava, below the Jagamohana the berm projects 10 yava.[2]

On the berm of Bauḷmāḷā stone** above the wheels there is in the South a Gumuṭa-maṇḍapa and in the North a Nityārghya maṇḍapa (for daily offerings) with rekha-cālas (here pīḍha-cālas)].[3]

Writing : [Standing on the platform there is the base of the khura (khura-pīṭha), 1 hasta 6 yava high. It is a plinth with lotus-petal mouldings of 9 yava 6 girā above and below. This lotus-plinth is running on the berm on all four sides of the bhadra-pīṭha.] (Repetition with greater detail) : [Leaving a receding band of 1 yava, there is a row of lotus-petals. In the middle there is fretwork (gavākṣajāli) of 2 yava, then the second row of lotus-petals of 3 yava 2 girā, then a dori of 2 girā with a chamfer, total height 1 hasta 6 yava.][4]

PL. 4 (a) *Design of the lotus-plinth.*

PL. 29-30 Writing : [This is how the base (pīṭha) of the Padmakeśara temple is constructed. From there begins the wall-part (bāḍa).]

(b) *Design of the pañcakarma*, elements numbered : [1-5] starting from below.

Mādalā Pāñji. (1) (Passage missing in this manuscript)
The crowning of the substructure (pīṭha-muhāṇti) has a total height of 1 hasta 9 yava.
The lowest course is a rājabandha of 8 yava, above that there is fretwork (jāli) of 4 yava, then a row of lotus petals of 11-1/2 yava, and over that the berm (pahaṇḍa).

PL. 28

(2) The berm below the śikhara projects by 6 hasta, below the Mukhaśālā it projects by 7, 9 or 10 hasta.

(3) On the berm of bauḷmāḷā stone there are three niches in maṇḍapas with pyramidal stratified roofs (pīḍha-cāla maṇḍapa) in the North, the South and the West.

(4) On the berm there is a lotus-base of 1 hasta 9 yava. Within this the first lotus-moulding (padma-pṛṣṭha) is 9 yava 6 girā, above this a fillet (dhāra) and above that another lotus-moulding of 7 yava.

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* See *Appendix No. 2.*

** kind of sandstone.

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Writing on the side : [This wall-part (jāṅgha-bhāga) of six divisions extends around the four sides of the temple, except at the doorways and at the niśā-temple bases (niśā-taḷa), then beḍha, 3 bhāga (in three parts). Within the height of the jāṅgha (pañcakarma) the uppermost band (vasanta) is of 8 yava, the lotus-moulding (padma) 5 yava, the kaṇi with chamfers) above and below) 1 hasta 8 yava, the recess in form of a ḍamaru (ḍamaru-bhāga) 4 yava, the kumbha 1 hasta 8 yava, the chamfer 4 yava, the khura 1 hasta 4 yava, below which is a band (dori) of 2 yava and the base (paṭā) of 5 yava.]

PL. 4

(c) *Design of the lower wall-part (barāṇḍi-bhāga)*

PL. 31-32

Writing : [This is the wall-part in two sections side by side, each of 5 hasta 9 yava height. It contains a row of Virājas (Virāja-bandha). By its side is a door-like pillared niche (khumba ghara, āḍaghara), having paṭa, pheṇi, baḷā, māraṇi (ḍamaru-form with rounded edges) and other elements, seven parts with chamfers (khāndis). The roofs (above the niches) made of two tiers (pīḍhas) are of 1 hasta 7 yava, the niche on the wall of 3 hasta 6 yava. (On the side of) the muhāṇṭi-śikhara with the padma-pīḍha the virāla-piṇḍi (lion-pedestal) is high 2 hasta 5 yava. The lion alone is of 3 hasta[1] on the anuratha wall of this rekha temple, the pāda and khura (parts of the pedestal) 1 hasta 8 yava. In every niche there are playful scenes (keli-bandha)[2]. The total height of this wall-part (barāṇḍi) is 6 hasta 2 yava.] (At the beginning it was mentioned as of 5 hasta 9 yava ?)

LEAF II B

Writing : [Above the wall (barāṇḍi) is the string-course (bandhanā), 3 hasta 3 yava in height. It has five bands, which together are 2 hasta 3 yava and have chamfers between them. Across the five bands there are niches with female figures (kanyā-ghara) after every two hasta. Every niche with its framework (alasā-dhāra) is 8 yava broad.]

PL. 4

(a) *Design of the bandhanā profile*

PL. 33

Writing below : [Leaving aside the chamfers totalling in height 1 hasta 6 yava, there are five bands (karma-works). Details are given by the side of the bands, starting from above : flat band (paṭā) 4 yava 2 girā high, rollmoulding (doribaḷā) 4 yava 2 girā, fillet (paṭṭa) 4 yava 2 girā

Mādalā Pāñji. (1) Virāḷa of 5 hasta.

(2) Specified as Caturaṅga (four divisions of the army) Śikṣā-dṛśya (Guru with disciples), Gaṇeśa, Brahmā, Śiva, Nārāyaṇa, Bhairava and other images, all 2 hasta 6 yava high.

(To this set of images belong most probably the Śiva-Naṭeśvara, the Gaṇeśa, the Mahiṣamardinī and Sūrya now in the British Museum in London)

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with khāndi, roll-moulding (baḷā) 4 yava 5 girā with khāndi, flange (pāda) 4 yava 2 girā with khāndi, all together 1 hasta 6 yava 10 girā.*]

(b) *Design of the upper wall-part (bhitti-barāṇḍi)*

Writing below : [Height 6 hasta 6 yava.] Writing by the side : [The wall above the bandanā has four horizontal parts, in height they are all together 5 hasta 9 yava. It is in two vertical parts, a śikhara with a
PL. 4 niche and a recess with female figures (nārī-ghara). This kanyā-bandha
PL. 33 contains big standing aḷasā-kanyās. The shrines for the Dikpālas are of 2 hasta 8 yava. Each one has a roof with two mouldings in form of lotus-petals (padma-prṣṭha), a pedestal for the Dikpālas and pillars (adorned) by small female figures of 11 yava. There are ten (16 ?) Dikpāla figures measuring 1 hasta 11 yava in height. Each side has four big kanyās, 16 in all, measuring 5 hasta 8 yava. The base of the Dikpāla-śikharas have three elements and the roofs have a kalaśa and other things. This completes the upper wall-part, whose height is 6 hasta 6 yava.]

(c) *Diagram of the Dikpāla disposition*

PL. 33 Writing by the side : [This is the disposition of the Dikpāla bandha: Īśāna, Indra, Agni, Yama, Nairita, Varuṇa, Vāyu, Kuvera.**]

(d) *Design of the profile of the garbhameḷāṇa* (courses numbered from [1–10] from below upwards)

PL. 34 Writing below : [7 hasta 4 yava.] Then by the side : [Above the upper wall-part the bandhamāna or garbhameḷāṇa is 8 hasta high and consists of 10 courses (bhūmis) with pheṇis, etc., with three niches (ghara) and khāndis. These are in the middle of the bandha (at the back of) the niśā-temples. Deducting the khāndis the meḷāṇa-jāṅgha (wall) is 6 hasta 4 yava high. In this bāḍānta there are ten bhūmis with alternating pheṇi and phuli, each of 3 yava, together 30 yava (lower and upper part of each bhūmi). Between them are flat bands (dori) of 1 yava 4 girā (?), the khāndis are (together) 18 yava. This goes up to the root of the temple-tower (garbha-śikhara). In front of this jāṅgha-meḷāṇa of 8 hasta there are, on the sides (of the temple) three pīḍha-temples. In these niśā-temples on three sides there are the Pārśvadevatās. Below the base of the corbel-roof is the platform for the three auspicious images.]

* This would amount to a height of 1 hasta 9 yava 1 girā, and together with 1 hasta 6 yava of the khāndis, the whole bandhanā would be 3 hasta 3 yava 1 girā high which might be fairly correct.

** some of these images are in the Koṇārka Museum, others in London,

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PL. 4
PL. 34

Design of the bandhamāna with a niche for images.

Writing by the side: [On the rāhā, leaving the two lowest courses (of the bandhamāṇa) the standing images are of 3 hasta 4 yava in the measure of the niche (dvāra-pramāṇa). In the north Ravi, in the south Mitra,[1] (the west is not mentioned).

LEAF 12 B

Sketch of the groundplan of half a niśā-temple (inner lower shrine with the drain in the middle)

Writing inside : [This is the groundplan of the niśā (niśātaḷa), 8 hasta 4 yava in length and 4 hasta 2 yava in width.]

PL. 4
PL. 36-38

Writing by the side : [This is the joining-place (gaiṇṭhāḷa between vimāna and mukhaśālā) reaching up to the base of the tower (rekha-pīṭha). The height of the wall is 26 hasta 10 yava. In this joining place (sandhi-sthaḷa) the wall of 7 hasta 4 yava has creeper-ornaments (latā-bāḍa). In the gaiṇṭhāḷa there is a rampant lion (uḍā gajasiṃha) of 3 hasta 7 yava, and above a standing group of man and woman together. There is one man to one woman.][2]

PL 39

Writing : [In a fighting posture, the warrior is armed with a dagger and protected by an armour. In the niśā-temples there are two images (one above and below). (In the lower shrine) on the western side there is Hara,[3] on the northern side Dharmamūrti,* on the other (southern) side Kṣetrapāla of 1 hasta 5 yava. The height of the niśā-temples on all three sides is 30 hasta. The shrine on the south side is 12 hasta 7 yava long and 8 hasta 7 yava broad, the spire (śikhara-pīḍha) of the niśā-temple is 6 hasta. The height of the upper shrine with the doorframe (toraṇa-pāṭa) is 8 hasta 4 yava. Above the shrine are six tiers of the roof (pīḍhas), then a śribeki, a pṛṣṭha-puṣkara, an alāśrī and other parts of the maṇḍapa.]

[The height of the frame-work around the image (prabhābāḍa) is 7 hasta 7 yava, holding in its middle the image, which is of nine head-lengths (navatāḷa proportion).]

In the western niśā-maṇḍapa, in a niche of the same size, the height of the image is 7 yava more (than the others). This standing image is 8 hasta high.]

Dhyāna of the image on the western side (in Sanskrit) :

PL. 40

[Wearing a radiant, shining headdress (chaṭā mukuṭa), covered with many ornaments, two-armed, holding two lotuses, with a peaceful, cheerful countenance, wearing armour and weapons, sur-

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Mādalā Pāñji. (1) in the back (West) Rudra
(2) above that a bandha-mūrti (mithuna) of 3 hasta 7 yava
(3) Hara-Sūrya

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* See Introduction, para 7 : The Sun God in Orissa

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rounded by heroes and Gandharvas, I adore Pūṣaṇa-Sūrya, whose chariot is drawn by seven horses.]

Dhyāna on the image of the southern side :

PL. 41-44 [On a chariot with seven horses, this image impersonating the three guṇas (triguṇātmaka vigraha), adorned with bracelets, chest-ornaments, crown, earrings, necklaces is the Lord of the Constellations (Tārakādhīśa). I adore the two-armed Sūrya, mounted on a chariot, the all-pervading, manifest Bestower of boons (Mitra).]

Writing : [On the northern side the measurements of the niche are the same, but Haridaśva (Sūrya) riding on a horse inside a prabhā is 3 yava less. Its height is 7 hasta. The horse is standing on its hindlegs.]

Dhyāna on the image on the northern side :

PL. 45 [All limbs covered with ornaments, riding fast on a golden (harita) horse, holding two lotuses in his hands and in one the reins of the horse, the peaceful Bhānu, wearing clothes of variegated colour and ornaments, is travelling along the road of the ether (śunya). I adore Haridaśva, the ever peaceful Lord of the world.]*

LEAF 13 B Writing : [After this come the measurement of the temple-śikhara (garbha māpa vidhāna).]

PL. 4 (a) *Design of the koṇaka* (corner-parts).

PL. 47-48 Writing : On all four sides of the garbha there are four koṇakas, the height of which upto the ceiling of the beki (beki-muda) is 58 hasta. Upto the ceiling of the garbha (garbha-muda) there are ten alāśrī-āmalakīs and ten bhūmis (for each āmalakī). The bhūmis are all equal, measuring 9 yava.[1] On the sides of the lower bhūmis (above each āmalakī) there are vajramuṇḍis of 9 yava (width),** their height is 1 hasta 2 yava. These are the measurements of the four corner-parts.]

(b) *Design of a small anuratha-śikhara.*

Writing : [In the anuratha there are five śikharas and nine bhūmis (for each śikhara). Every bhūmi is of 11 yava, the khāndis between bhūmis are of 2 yava. In the rekhagarbha (vimāna) the first beḍha*** is 4 hasta 10 yava, the second beḍha 4 hasta, the third beḍha 3 hasta 1 yava, the fourth beḍha is 3 hasta, and the fifth beḍha is 2 hasta 10 yava. Thus each of the four anartha-pāgas has five śikharas reaching up to the beki

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Mādalā Pāñji. (1) the āmalakīs are also of 11 yava, after every bhūmi a long recess (measurement more likely to be correct.)

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* For more elaborate Dhyānas of these aspects of Sūrya see App. No. 20

** Certainly a writing mistake.

*** group of bhūmis supporting the śikhara.

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muda.[1] These are śikharas with āmalakī śikhara-cūla. Each trimuṇḍi cūla* is of 1 hasta 2 yava. On the four anarthas each śikhara is 1 hasta 3 yava less than the one below. In every five kāṭhi (there is a reduction) of one part.] Writing on the last line by the side of the drawing : [khāndire gāra (line of khāndis).]

PL. 4

(c) *Design of the rāhā.*

PL. 47-48

Writing on the left side : [āḍa rekha (side-line)**, pheṇi (cyma reversa).]

Writing underneath : [jaḷā (recess), pheṇi,] in the centre : [rāha-pāga,] below inside : [bhūmis,] numbered from below upwards [1-5 etc]

Text : [On the rāha the width of the pāga is 4 hasta 10 yava (might be in depth ?), the trimuṇḍi (vajramastaka) is 8 hasta 4 yava (high ?). Every course (bhūmi) is 11 yava (high). The line of every bhūmi is cut at the edge in the form of a pheṇi. From the trimuṇḍi to the beki (neck) all the round cavities (jāḷā) are 3 yava. In the west, the south, and the north there are vajramuṇḍi maṇḍalas reaching to $\frac{1}{4}$ of the height of the garbha. In the centre (of the vajramuṇḍi) there is an image and above it a gajasiṁha (projecting rampant lion).]

PL. 4

(d) *Design of the rampant lion (gajasiṁha), its position inside the wall-work.*

Inscription by the side of the cavity by the side of the first ceiling : [muda-taḷa-garbha], inside the cavity : [This is the tenon (bharaṇī-śilā).] On the corbel : [muda bharaṇī (coping-stone).] The gajasiṁha is set into the wall with a tenon of 5 hasta. It has an elephant of 1 hasta (height) as a pedestal. The lion is 3 hasta high.][2]

Mādalā Pāñji. (1) Here the measurements of the śikharas are : 5 hasta 10 yava
4 hasta 10 yava
3 hasta 10 yava
2 hasta 10 yava
2 hasta 4 yava***

(2) 11 hasta 12 yava. (This evidently refers to the big lion on the Eastern side but is far in excess of actual measurements, while the measurements of our manuscript, even if referring to the smaller lions on the other three sides fall short of these).

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* pyramidal ornament like Vajramuṇḍi on the lowest bhūmis.

** rekha with a short a at the end can be a border-line and here may mean the slanting line of the temple-side.

*** These measurements most probably refer to the śikharas, while those of our manuscript may refer to the bhūmis below the śikharas, called beḍhas. Thus both should be added together and also the khāndis, in order to come nearer the height of 58 hasta declared for the śikhara. Even so we reach only the number of about 50 hasta for the total height from the root of the śikhara to the viṣama.

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PL. 46 Writing : [On the rāha-pāga of the eastern side in the upper quarter of the gaṇḍi, on top of a straight projecting śikara (rekha deuḷa) of 7 hasta and a bracket-pedestal (kumbha-pīṭha) of 3 hasta 8 yava is a rampant lion (uḍā-gajasiṁha). The vertical measure of the lion is 5 hasta and reaches upto the 7th āmalakī. The crouching elephant is 2 hasta high. The tenon (bharaṇī) reaches inside to the corbel ceiling (bhāra-cāla).]

LEAF 14 B Writing : [Measurements of the pañcaratha temple pāgas (pañcaratha pramāṇa pāga māpa vidhāna).]

PL. 48 [At the head of each pāga there is a pedestal (bhadra-pīṭhikā) of 1 hasta 3 yava height, and over this the beki (neck). From the kaṇṭha (neck) to the top of the pāgas (the distance) is 4 hasta 2 yava. The neck is all around 8 hasta 9 yava high and reaches upto the āmalaka. Towards east, north and the other directions there are eight images inside this neck-part : Garuḍa gāṇḍiā-bhaṇḍa siṁhas (lions with one head and two bodies) are on the corners and above the rāhās there are hāṭa-aḷasī-muṇḍiāmūrtis.][1] (crouching figures supporting loads on hands and head).

(a) *Design of the gāṇḍiā bhaṇḍa-siṁha*

PL. 47-49 Writing on the right side : [The seated images (Bhairavas) of 14 pā (of full measure, well-proportioned) reach from the Garuḍa-piṇḍi up to the āmalaka (muṇḍi) and measure 3 hasta 8 yava.[2] The gāṇḍiā-bhaṇḍa siṁha is also of 14 pā (of a full good measure). The band supporting the āmalaka (dhāra) is 1 hasta 8 yava. On this baiṭhimuṇḍi (supporting head) is the viśvavartuladhāra (āmalaka) of 5 hasta 10 yava (height.)[3] The circumference of the āmalaka is 35 hasta,[4] each sector 9 yava, khāndis 8 yava. The stones are solidly bound together with iron cramps (bāgiās), so as to become solid as a bastion (guruja).* On the alāśrī is a covering plate (dhāra-paṭi) of 5 yava (height). On top of this the khapuri of 2 hasta is moulded in a triple curve (tribhaṅga) like lotus-leaves sloping downwards, with a dhāramuṇḍi of 10 yava (flat upper part).** Over this is the ugrapaṭṭika (egārupaṭṭika) of 2 hasta 3 yava

Mādalā Pāñji. (1) In the middle, between four lions, above all the pāgas there are Bhairava images of 5 hasta 4 yava (correct, no crouching figures)
(2) 5 hasta 4 yava
(3) 3 hasta 10 yava
(4) 16 hasta 6 yava ghera pratire (here perhaps diameter ?)

* See *App. No. 7.*
** See *App. No. 8.*

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in form of hundred-petalled lotus with raised points going all round, high 1 hasta 3 yava and broad 3 hasta.[1]

PL. 4

(b) *Sketch of what may be a vajramuṇḍi.*

PL. 47

Writing : [Egārupaṭṭika cumbaka kāma.* Above the khapuri of 2 hasta is the dhāra-muṇḍi of 10 yava with the upara śiḷā (upper part of the egārumuṇḍi) of 1 hasta 7 yava (height). The dori, the kaṇi and the phuli (crowning part) of the egārumuṇḍi are 9 yava (altogether).]

(c) Writing across an effaced drawing of the kalaśa : [The Śrīkalaśa is (altogether) 7 hasta 4 yava : the kumbha 1 hasta 4 yava, the baḷā (belt) 4 yava. On the belt a belt-seal (paṭṭa-muda) of 8 yava, a dori of 3 yava, a kaṇi-rekhā (?) of 8 yava. The cover (nauti) is 3 hasta 5 yava. The lid (ratna-pedi-muda) is 9 yava, (total) 7 hasta 10 yava (?) Fitted into the padmaśrī (lotus emblem on top of the kalaśa), into frames with teeth are pearls and 12 pieces of rubies inserted in lapislazuli (vaiḍurya ?).]

Writing below the design : [These are the measurements in kāṭhi (kāṭhimāpa) of the Padmakeśara temple. From the bhadrapīṭha (base) to the lotus-flower (padmakeśara) including all these parts, it stands 150 hasta 1 yava.]

LEAF 15 B

[Śrī Śubham Astu ! Śrī Sūrya Nārāyaṇa Namaha !]

PL. 4

PL. 50-51

Writing : [These are the measurements of the jagamohana of the Padmakeśara temple. The base (talapīṭha) is the same as below the temple (vimāna), with pañcakarma, jāṅgha, bandhanā, śikhara and other elements, from the lotus-socle (padma-pīṭha) upwards. This is a pīḍha temple, it has 31 divisions in width and 60 divisions in height. Above the lotus-socle (padmapṛṣṭha) the height of the wall is 25 hasta 8 yava. In this the khura is 1 hasta 7 yava, the kumbha with khāndi 1 hasta 8 yava, paṭṭi and kaṇi 1 hasta 4 yava, vasanta with khandi 1 hasta 2 yava. This work is made on all four sides except at the doorways. The total height of the pañcakarma is 5 hasta 9 yava. Above this is the straight lower wall-part (tala-barāṇḍi-rekha), which is 4 hasta 5 yava. In this there are

Mādalā Pāñji. (1) a khapuri in the form of lotus-petals, high 3 hasta, on a tinikhaṇḍiā alāśrī (alāśrī in three layers)=see note on āmalakas in *Appendix No. 7*
Padmapatra high 1 hasta 9 yava
Egārumuṇḍi on the baiṭhi 2 hasta 4 yava

* See *Appendix No. 11* on egārupaṭṭika and cumbaka lohā. Verification of these measurements remains problematic, because also the Śilpasāriṇī, while giving a description of the construction of the egārupaṭṭika, does not mention what proportion it should have in relation to the kalaśa it is supporting, and the designation of the single parts is quite different.

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rounded pillars (vartula khumba) as pedestals for standing lions (uḍā-siṁha-pīṭhas).]

(a) *Design of a gajavirāla*

PL. 4 PL. 50 Writing on the right side : [Virāla, Gajavirāla. It is 3 hasta 11 yava high (without pedestal), placed within the recess in the lower wall. (above this) is the string-course (baḍa-bandhanā) in horizontal bands : paṭṭa, dori, pāda and other bands run around all four sides (of the temple), except at the doorways. Including the interstices (khāndis) of 6 yava, its total height is 1 hasta 11 yava.[1] By the side of this (the lions) is the anuratha part with śikhara.]

(b) *Design of the anuratha*

PL. 52-56 Writing underneath : [Anuratha. The anurathas on both sides of the koṇaka (corner-part) are 5 hasta high and have two śikharas (one in the upper and one in the lower jāṅgha). The śikhara-pillars are 3 hasta 2 yava high. Above the pillars there are three pīḍhas and a kalaśa on top. In the measure of the niches there are love-scenes (mithuna), playful scenes (kelibandha).[2] Above this is the upper string-course joining the roof (bandha-meḷāṇa). This wall-part has nine courses (bhūmis) of 8 yava each : paṭṭa, pheṇi, kaṇi, vasanta, and other works, enclosing the garbha (bandhani).]

(c) *Design of the pratiratha*

Writing : [In the anuratha there are pratirathas (twin pilasters) in the form of pillars with a width of 1 hasta 8 yava. The anuratha is of 3 hasta width. On these pillars there are two sets of images. The figures PL. 55-57 are 1 hasta 8 yava high. Above these pillars there are ten courses (bhūmis of the garbhameḷāṇa), with pheṇis and other elements composing the sealing wall (muda-jāṅgha). Its total height is 6 hasta 5 yava.*

Mādalā Pāñji. (1) Pāda = 6 yava
khaṇḍi = 4 yava
dori = 5 yava
paṭṭa with khāndi= 6 yava
(Total=1 hasta 6 yava)

PL. 52-53 (2) Kelibandhas are detailed as : Durgā-mādhava pūjā (Durgā with Jagannātha and Śivaliṅgam worshipped by the Rāja). Sūrya vivāha (marriage of Sūrya), Gurugṛha (house of the Guru), Rāja vijaya (King's victory or King's procession), Bāṇa-marā (Kings hooting arrow), Śiva-Pārvatī Svayambara (marriage of Śiva and Pārvati (?), Sūryaratha) the Sungod's chariot), Yajña (a sacrifice) and other images. The height of all these images in muguṇi-stone is 1 hasta 8 yava (?).] (Some of these images are in the Museums of Koṇārka, Calcutta and Delhi. Their size is about 2 hasta 4 yava).

* According to information given by a traditional sthapati, the pratiratha is the inner of the two conjoined pilasters with mithuna images, the outer pilaster, which has only creeper-ornaments is called bandheni. Here the measure appears to include both the pilasters, and bandheni are not mentioned.

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PL. 57

Writing cont : [In this wall-part there are three portals : in the south is the Dakṣiṇa gumuṭa-dwāra, in the north the Bhaṇḍāra-vijaya-dwāra (Treasury-door), in the east the Aruṇa-varuṇa-dwāra (for the pūjā to Aruṇa). Inside the projecting walls (alasā-bāḍa) the seven bands (of the door jambs) measure 3 hasta 6 yava (in width). Between the projecting walls there are three round steps (nandāvarta) of 4 hasta 8 yava (width). Between the seven bands is the passage of the portal (vijaya vāṭa) towards the maṇḍapa for the pūjā to the rising Sun (Udaya-Sūrya-pūjā-maṇḍapa=the Nāṭamaṇḍapa). Above the place of the pañca-karma there are bandhanās with a dori in the middle, of 1 hasta 8 yava (on the outer side of the alasā-bāḍa). Above these are barāṇḍis of 5 hasta 7 yava, on which there are playful images (kelibandhas) as on the anurathas.]

LEAF 16 B

(a) *Design of the base of the door-jgmb*

PL. 4

Inscription on top : [Dwārabhāga (doorpart)].

PL. 58-60

Writing : [The height of the portal is 16 hasta with seven bands (beḍha). On the lintel, within a breadth of 6 hasta there is the Lakṣmī-bandha and Rājabandha. Gajalakṣmī is 11 yava square on this lowest band (talapaṭṭi). The Rājabandha is 8 yava high. On the side of (above) the Lakṣmībandha is a Nāgakanyābandha (frieze of entertwined serpents). At the base (of the door jamb) is the sākara-paṭa of 3 hasta height. Within these 3 hasta there are three elements of 11 yava each. The base (pīṭha) is 9 yava. In the middle, between the clefts (khāndis) are seven khumbis (pilasters) with Nāgakanyās of 1 hasta 2 yava. Above the khumbis are two pīḍha-maṇḍala-deuḷas (pīḍha roofs). Straight above them a vajra-muṇḍi-cūla of 10 yava on a base of 2 yava.]

(b-c) *Design of the door-jambs in two parts*

Writings on the right and the left side : [On the jambs of the portal are seven decorative motifs : First (innermost) a flat band with creeper-work of 4 yava (width), then after an interstice a frieze of entwined serpents (chanda-nāgabandha) of 5 yava. Then three (alternating) motifs divided by pīḍhas and chamfers : a niche with love-images (rasa-bandhagṛha) of 5 yava height and a vajramuṇḍi of 11 yava above. On the lintel above, the Lakṣmībandha (the rasabandha) becomes a row of 8 dancing figures (aṣta śakhi nṛta bandha).* Next comes a line of creepers with girls within the loops (ḍāḷi-kanyās) of 8 yava. Above the Lakṣmī-bandha (on the lintel this becomes a Yogi-bandha.** The fifth frieze is

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* in reality they are seated musicians

** here a frieze of flying Vidyādharas

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in form of pilasters (bandheni-bandha)[1], then again a frieze with alternating vajramuṇḍi and bhoga (enjoyment) motifs. The last two friezes are 11 yava (wide). After an interstice comes the seventh bandha, a waterplant motif (boḷajhānji), every leaf being 5 yava broad. Then a triple border (dhāra) with lines and lotus-petals of 11 yava on the sides, which touch the wall. This is the type of frame-work for all four portals. On top of the lintel there is a rāśiphuliā kaṇi* with a border (beḍha) of 8 yava. From the muda kaṇi line (covering line) to the Lakṣmī bandha (the lintel) is seven bands broad. The boḷajhānji frieze remains the same on the lintel. On the ground the portal has two sets of round steps (nandāvarta) Above the eastern portal there are the sculptures of the nine planets (Navagraha). On all three portals there are rows of Navagrahas like this. The eastern toraṇa (arch) is supported on two facetted (octagonal) pillars (āśrā-khamba). At the base of these pillars there is a pañcakarma of 3 hasta. Above this is a pair of Virālas, then fret-work (jāli), a cyma reversa (pheṇi), then a sākara (ornament in vertical compartments) and other things, altogether 12 parts. The total height is 25 hasta, the pillar alone being 22 hasta. Leaving aside the side-walls, (dhāriṇī alasā bāḍa) of six hasta (projection), the pillar in front has a projection (or girth) of 4 hasta 6 yava (?).]

(d) *Design of the pillar at the end of the leaf.*

LEAF 17 B
PL. 4
PL. 61-63

Writing : [On these pillars there is a stone-arch, whose middle part or opening is of 13 hasta in a total width of 15 hasta 11 yava. There are two makaras on the sides jutting out as a counter-weight. Between them are the images of the Navagrahas, each one within an arch (bāṅka) of 2 hasta (height) placed upon small pillars. These arches (bāṅkapaṭi)** are 8 yava broad. Above the arches (of the Navagraha images) there is a Sūrya image in the centre and six alasās (female figures) on the sides, placed between two small pillars with pheṇis (pheṇi-khumbis). They are separated from each other by posts (dhāra) of 9 yava. Above them is a small pīḍha roof, which makes it look like a house.][2]

Mādalā Pāñji. (1) Ālamba bāndheṇi (pillar with hanging garlands)

(2) On the eastern and the other portals there are Navagraha stones. Covering the Navagraha stone there is a toraṇa (arch) whose height is 6 hasta. On the face of the arch, whose width is 2 1/2 hasta, there are seven ornamental motifs; a border of lotus-petals (patrabeḍha), bead-work (guṇḍikā) and other things. In the centre it holds an image of a seated Sūrya, 2 hasta 10 yava high.

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* like a til-flower with small triangular points.

** bāṅkapaṭi=trefoil arch, see Glossary.

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PL. 62-64

(a) *Design of the Navagraha stone and the sākara**

Writing below : [On this stone there are Navagraha images, 9 figures.]

Writing above : [This is the sākara of the portal (dvāra sākara) with piḍha roofs (dvāra piḍha bandha).]

[Above this crowning or covering (bandha-pīḍha) the first tier of the piḍha roof projects by 2 hasta 8 yava, overhanging in its entire thickness. The height of the outer border (pīḍhamuhāṇṭī) is 1 hasta. On this, between a framework (biṭa) of two rows of beads there is creeper-work (latā-bandha) and there are war-scenes (caturaṅga),]

[The edges of the pīḍhas ending in a row of triangular antefixes (khaṇḍitāṁśarekhā) form a slanting line (oladhāra). Upon the six tiers of the first roof (pīḍha) the central projection (or elevation) above the portal has a stratified pyramidal roof (pheṇi padma cāla) overreaching by 11 yava the first set of pīḍhas, which measures 10 hasta 3 yava from the first tier to the wall above. After the pīḍha roof comes the vertical wall (bharaṭi).]

(b) *Design of the pīḍha-roof (numbered 1-6) and of the bharaṭi.*

(c) *Detail of muhāṇṭi and khaṇḍitāṁśarekhā.*

PL. 65-72

Writing below : [muhāṇṭi] above : [pheṇi-padma-cāla, khaṇḍitāṁśarekhā, Rājabandha.]

By the side : [On top of these, leaving 2 hasta 3 yava for the roof-berm (cāla pahaṇḍa), there is a wall in recess (bharaṭi alasā bāḍa) of 4 hasta 4 yava height. (In front of it) there are standing female musicians (bajantari kanyās) of 14 pā (well-proportioned or life-like). Above the three portals there are images of Ghaṇṭākarṇa Bhairavas as protectors, four images in all.** This is the first roof with a ceiling (mudapīḍha)***. Upon this wall (varta-pīṭha-mūli-bharaṭi) there is a second series of six tiers all around projecting on all sides. It is constructed in form of a bhadra, as the one before, with recesses (or chamfers) and other parts. The six tiers follow the projections of the bhadra-pīṭha. Its height is 9 hasta 8 yava and has again a vertical wall above. The pheṇi-padma-cāla with the trimuṇḍi-cūla**** measures 6 hasta 11 yava. The wall behind has

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* sākara=row of niches with figures, see Glossary.

** There are six or eight in all. See the Dhyāna of the Ghaṇṭākarṇa Bhairava in the *Appendix No. 12.*

*** According to the Śilpasāriṇī there would be no inner ceiling above this first pīḍha, see Mahāpraśasta garbha and Mukhaśālā in *Appendix No. 2*

**** top-part of the pyramidal elevation above the portal, formed of projecting pīḍhas culminating in this trimuṇḍi-cūla.

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PL. 73 a rājabandha relief of 1 hasta 8 yava.] (There are also architectural motifs, Nāgas and Alasā-kanyās.)

(d) *Design of a Ghaṇṭākarṇa Bhairava*

PL. 74 Writing above : [This is the Ghaṇṭākarṇa.] Below : [4 hasta 6 yava. Female musicians are placed on the berm, height 3 hasta 8 yava. The wall of the bharaṭi is 4 hasta 1 yava. The face of the wall (pīḍha dhāra) is decorated with a rājabandha and with rows of elephants (māt-aṅga-māla-bandha). After this comes the ceiling roof.]

LEAF 18 B Writing : [The upper sealing-roof (mudala-pīḍha) is made in the same way as the first, following the shape of the bhadra-pīṭha. The third pīḍha roof, high 4 hasta 8 yava has five tiers. On every tier there are covering stones (cāpa prastara), set up with cramps. The wall above (alasā-pīḍha-prabhā) is 2 hasta 4 yava (?). This is the wall of the beki (muda beka bāḍa) which has plain vertical ribs (bhadrāṁśa) all around.]

(a) *Design of the profile of beki and khapuṛi śripiṇḍi*

PL. 4 Inscription by the side of the beki (neck) : [aṁśa].

PL. 75 Writing : [In the four outer corners there are plain pedestals (suāsa baithi) with borders in form of lotus-petals, on which four pairs of gāṇḍiā-bhaṇḍa-cirāsiṁhas are placed. The height of the lions is 5 hasta, the mane is 5 yava.[1] Upon this beki of 24 pair of stone-ribs, sealing the roof, (muda-beki) the round śrīgaṇḍi piṇḍi (pedestal for the śrīgaṇḍi) is placed. These supports (aṁśa) are made all around 3 hasta high. Upon this the round garbha-khapuri is 6 hasta 6 yava (?) in height (vistāra ?)[2] with 64 lotus-filaments (keśara) 6 hasta long. On this there is a platform in shape of a flat āmalaka (sama-vartula-pīṭha), in between the two a round plain neck with a border (dori) 11 yava high all around. On this round recess (garbha) eight crouching female figures (alasā kanyā mūrti) are placed in front of the wall, carrying the inverted (?) load of the double (joḍā) amalā.* These girls (kanyās) supporting the āmalaka on their heads (āmalakī muṇḍāi kanyās) are on all four sides, height 2 hasta. The plate of 4 yava supporting the āmalaka (amalāpaṭṭi) is in the recess of the wall. In the āmalaka each sector (rekhā) is of 7 yava (width), the height of the whole is 2 hasta 6 yava[3] on all four sides. There is an inset (pyāṇyā) khapuri over it, shaped like a lotus-calix, with a covering plate (dhāra), all together 1 hasta 7 yava high. The foot of the kalaśa measures 1 hasta 4 yava in height.]

Mādalā Pāñji. (1) 3 hasta 10 yava with the mane
(2) 16 hasta 6 yava diameter
(3) 4 hasta 8 yava (perhaps with the khapuri)

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* said double perhaps because built up in two layers,

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(b) *Design of the khapuri śrīpiṇḍi and āmalakī*

Inscription inside : [Śrīpiṇḍi)

Writing : [Above the foot of the kalaśa the lower bowl (talanauti) is of 1 hasta, the belt-seal (muda) measures 10 yava The cover of the kalaśa (dadhinauti) measures 1 hasta. The lotus with stem (khīla-padma) which goes inside the kalaśa-cover (kalaśa-muda) down to the piṇḍi measures 2 hasta 4 yava and has 12 petals.]

(c) *Design of the kalaśa and the padma*

Writing by the left side : [Great lotus (Mahāpadma).]

Below : [This is the kalaśa.] On the right side : [Egārupaṭṭi,] again on the left side : [Egārupaṭṭi.*]

These are the measurements of the Padmakeśara mukhaśālā. Śrī Sūrya Nārāyaṇa may give salvation :

Signed : Candera Mahāpatra, Gaḍarupāsa (village), 1237 san (sala era)=1830 A. D.

LEAF 19 B
PL. 5

Writing : [Measurements of the interior of the gumuṭa-mukhaśālā. This (hall) has 14** parts in width and 24 parts in height. It has 4 portals on its faces. The inner hall is (a square) of 23 hasta.*** It has four pillars 32 hasta high, over which iron girders are laid in a square. Around the pillars there is an ambulatory (dhokaḍi). There is a door of 7 hasta opening between mukhaśālā and garbhagṛha. At the joining place (gaiṇṭhāḷa) there is a raised platform in the passage (vallabhapiṇḍi). This Aruṇa-pūjā-piṇḍi (on the side wall) is for keeping the image of the paruṣa (manly) Narāyaṇa, the utsavamūrti of Sūrya. In front of the kalāghāṭa dvāra**** (towards the garbhagṛha) three are three round steps (upwards). After the steps there is a passage (vijayavāṭa) 5 hasta long.

PL. 76-77

And after that the abode of the jewel-garlanded Mahāsūrya***** which is 21 hasta square. The height of the jewel-altar (ratna-vedi) with the rājabandha is 3 hasta 3 yava, the width (vistāra) is 4 hasta 6 yava. There is a long path for circumambulation (dīrgha beḍha vāṭa) of 13

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* Nowhere is it mentioned that the kalaśa of the mukhaśālā also required an egārupaṭṭika

** 12 parts, according to the Śilpasāriṇī, see *Appendix No. 2*

*** Too little, unless the measurements were taken between the pillars, since the ambulatory is mentioned afterwards.

**** Kalāghāṭa is the centre of the Sahasrāra, the thousand-petalled lotus on top of the cranium, the Brahmasthāna, where Kuṇḍalinī unites with the supreme Brahman (in Yoga).

***** Mahāsūrya-āvarta-ratnamāla-pokhariā is the whole expression, which means : the tank surrounding the jewel-garlanded Mahāsūrya.

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kāṭhi around the altar. On this pedestal is seated the victorious, propitious Mahābhāskara image.]

LEAF 22 A *Design of the image of Mahābhāskara in the main shrine.*

PL. 5 Writing by the right side : [On this pedestal there is the image of
PL. 76 Mahābhāskara. Above the pedestal there is the raised seat (baiṭhi) of 9 yava (height). The prabhā of sandstone (sāhāna) has a width of 3 hasta and a height of 4 hasta 8 yava.*]

Writing on the left side : [This (whole) image is 5 hasta 6 yava high. The Great Image (Mahāmūrti) placed inside (the prabhāmaṇḍala) is 4 hasta 6 yava high.] Measurement written below : [5 hasta] and : [that baiṭhi is placed on the piṇḍi.]

[Now I am writing the measurements of the outer parts.]

LEAF 20 B [Writing : [In front of the portals on all sides of the Padmakeśara
PL. 5 and 6 mukhaśālā there are seven round steps (varta) and twelve (14 in ciphers)
PL. 78-79 steps down to the main way (vijaya-vāṭa). There are two projecting walls (dhāra pahaṇḍa) by the side of the eastern stairway. Along their base are horses of 5 hasta (length), four along the southern and three along the northern wall. Upon this projecting wall (barata ghosarā) there are lions. Their height with the elephants is 6 hasta, their breadth is 3 hasta 3 yava. The height of the lions alone is 4 hasta 5 yava.]**

[At the main entrance there are pillars with dwārapālas measuring 2 hasta 6 yava. On top of the pillars there is a slab (pāṭa) ?

This is the description of the eastern portal.]

[Now I shall write about the construction of the Nāṭamaṇḍapa for the daily procession and Bandāpana functions, the maṇḍapa. where Ravi Nārāyaṇa is met.

PL. 83 At a distance of 3 kāṭhi from the vijayadvāra siṁha varta (steps of the lion-portal of victory) there is the Aruṇa stambha (pillar). The pillar of 28 hasta is inserted into the pedestal for 5 hasta 4 yava. The visible part is 22 hasta 8 yava. The shaft of the pillar is 16-sided (Viśva-kāṇḍadaṇḍa).]

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* plain stone slab supporting the back of the image, not visible from the front.

** The *Mādalā Pāñji* does not mention these lions. In the report of Bābāji in the Mādalā Pāñji of the year 1770 approximately, two lions are mentioned which he had placed before the eastern entrance, whether of compound, Nāṭamandira or mukhaśālā is not mentioned. One of these is most probably the one on Fergusson's design, and on C. Mackenzie's design, reproduced in Debala Mitra's Konarak, published by the Archaeological Survey of India 1968, and they figure also on the palm-leaf design on Plate VI. See Introduction, p. II.

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LEAF 20 A

(a) *Design of the Aruṇa-stambha*

LEAF 21 A

Writing on side-top : [pillar-head or capital (khamba-cūli).]

PL. 5

PL. 83

By the side : [Viśvakāṇḍa khambha.] by the side of the pedestal : [pīṭha.] This is the pedestal of the 16-sided pillar. This Aruṇa-khamba, measured from the base (talapīṭha) is 24 hasta high, the capital (padma-puṣkara) is 1 hasta 5 yava, the pedestal (talapīṭha) 3 hasta 6 yava. It is a starshaped pedestal (bhadra-kaṇi-pīṭha). The 16-angled pillar above the pedestal is 16 hasta 8 yava (?). The pedestal has five parts : pāda, kaṇi, vasanta, padma-pṛṣṭha, pheṇi, etc. and in the four corners gāṇḍiā-bhaṇḍa siṁhas of 11 yava.]

(b) *Design of Nāṭadeuḷa bhūmi* (in form of a yantra)

Writing above : [eight squares, numbered 1-8 (all in a row).]

PL. 84

In the centre : [twelve bhūmis for the twelve Ādityas.] They are disposed in the form of a cross, with a small circle in the centre.

(c) *Design of the elevation of the Nāṭamaṇḍapa*

Writing on the right side : [This is the Padmakeśara Nāṭamaṇḍapa made on the lotus-maṇḍala of the planets (graha-abja-maṇḍala).]*

Writing on the left side : [Basement (talapīṭha) 12 parts, wall-part (bāḍa-jāṅgha), first pīḍha, second pīḍha, third pīḍha.] On the other side : [varta.] Near the lion : [This is the door-lion (dvāra gajasiṁha). The lion is 4 hasta (high), the mane being 1 hasta 2 yava (perhaps from the shoulder), the elephant 3 hasta, (total) upto the crest (cūla) 8 hasta (?) breadth 3 hasta 3 yava, the base (gājapīṭha) 4 hasta ?]

LEAF 20 B

PL. 5

Writing : [After this comes the Nāṭadeuḷa. Its extension in both ways is 47 hasta 4 yava. At the back of the Nāṭadeuḷa is a double stair-way, facing two sides (do-muhāvarta) of seven steps (on either side). Above is the berm (beḍha-pīṭha) which has three circular steps (caka nandāvarta). On the pahaṇḍa they are projecting by 3 hasta between the two stairs. On the eastern side the stairs have 9 steps and the berm projects by 6 hasta.] Writing cont : [pīṭha (plinth). On all four sides it has a plinth with lion's tooth (siṁha kaṇi). Within its height the pāda is 8 yava, the roll-moulding (baḷā) 4 yava, the flat band (rekhā) 8 yava. These three elements run around all four sides. Above this is a wall-part (barāṇḍi) of 1 hasta 7 yava. Against every door there is a pañcakarma of 1 hasta 6 yava. Above this the pilaster has eight vertical stepwise receding edges (khumbi-jāṅgha with eight aṁśas). There is fretwork by its side. On each side there are four vertical struts (beḍha) of 1 hasta 3 yava with

* See *Appendix No. 4* and Leaf 7-8 A, c

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six elements : Roof (cūla), niche (gṛha) slanting roof (pṛṣṭha) and other parts.]

PL. 5 (a) *Design of siṁha-kaṇi pīṭha and lower barāṇḍi*

PL. 85-90 Writing inside the drawing [plinth (talapīṭha), 3 parts.]

Writing by the side : [Between the plinth and the roof of this wall there are niches, and rows of dancing girls (nāṭakanyā-bandha) of 1 hasta. with a base (baiṭhi) of 4 yava and a vajramuṇḍi of 6 yava on top. All together (i. e. both Nāṭakanyā-bandhas on top of each other) 3 hasta 7 yava. Above this is the string-course, and above this, as below, there are vertical parts with niches and śikharas and other elements measuring 1 hasta 9 yava. Above this there is a cornice slanting backwards (pṛṣṭha) of 11 yava, then a flat band (dhāra) of 3 yava and a rājabandha of 8 yava, which projects by 4 yava. At the junction of each pilaster (with the berm) there is a crouching Bhairava (bhāra-Bhairava) as a gargoyle. This is the substructure which extends all around. It is covered by a berm (aḍaṅga) of 4 hasta (width), on which the temple proper is built.]

PL. 91-92 (b) *Design of the jāṅgha barāṇḍi described above, with pañcakarma, two barāṇḍis, one bandhanā and the pīṭha-muhāṇṭi.*

Writing :* [It is of three parts (tin-bhāga-pīṭha) : pāda with dori, both of 8 yava, in the middle a wall-part with niches of 1 hasta 4 yava. Above this a cornice (bandhanā) all around of 11 yava. There are four entrances in the four directions and at each doorway there are 4 steps. (On the sides) there are pillars, forming a kind of door-frame. They are in three parts : first a pañcakarma of 1 hasta 8 yava, then a nāṭakanyā-barāṇḍi, shaped as a pillar (khumbi-dhāra) of 1 hasta 9 yava. In between them a pilaster with small pyramidal roofs (cūli-khumbi)

(c) *Design of Nāṭakanyā-barāṇḍi*, (strut with dancing figure)

PL. 93-94 Writing : [After such roof (pṛṣṭha) ?.....

At the base of the wall there are niches covered by roofs in the shape of pheṇis (pheṇicāla-gṛha) of 9 yava. The bandhanā is in the middle, above this is, as before, a Nāṭakanyā wall. Above this is the barāṇḍi of 3 hasta with mithuna (Rati) work and then the string-course joining the roof (bāḍajāṅgha-meḷāṇa) with 9 courses (bhūmis).[1] Over this is a frieze with royal figures (rājabandha-beḍha) of 9 yava height, above the door or portal a lotus-frieze (pākhuḍā-beḍha). On top of this the pīḍha-roof projects by 2 hasta. The six tiers there are moulded like lotus-petals

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Mādalā Pāñji. (1) 10 bhūmis (perhaps counting the rājabandha)

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* The following refer to the podium above the berm, called the mattavāraṇī.

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(on the upper surface) and have raised borders (muhāṇṭi). They have a height of 6 hasta 2 yava. Upon this there is a wall (pīḍha-maṇḍala) with vajramuṇḍis of 1 hasta 3 yava. Then comes the second pīḍha-roof of four tiers, high 4 hasta 8 yava. On the four corners there are four cirasiṁhas of 2 hasta 4 yava[1]. Then comes the beki of 1 hasta 6 yava and the alāśrī of 1 hasta 8 yava. In this way is the Nāṭakanyā-maṇḍapa built on a bhadra-pīṭha.]

PL. 97-98

[At the base of the eastern doorway there are the projecting sides on the stairs (suāsa barata), which are as high as the gajasiṁhas. Behind (above) them is a kalaśa (on top of a pillar) of 1 hasta 3 yava, placed on a khapuri. Below is an image. In front of the lions is the temple with a passage at the entrance of the compound. (gumuṭa-vāṭa-deuḷa) .]

LEAF 22 A

Two broken leaves belonging to another manuscript.

Writing in the middle: On the pīḍha roof of the Bandāpana maṇḍapa there are cira-siṁhas of 1 hasta 11 yava (?) reaching up to the muṇḍi (śrī-gaṇḍi-piṇḍi). Above this is a khapuri in form of a lotus (padma-khapuri) of 1 hasta 5 yava, with a border (dori) of 4 yava. The khapuri with the kalaśa and other things are all together 4 hasta.]

PL. 5

(a) *Design of a long lotus-plinth.*

PL. 99-100

(b) *Design of the lower part of a gajasiṁha*

(c) *Design of the ḍamaru pedestal of an image.*

All these designs belong in all probability to illustrations of the Siddha-Rāmacaṇḍī temple,* of which the upper parts, one or two leaves are missing. The following writing refers to this temple.

Writing : [This is the basement (talapīṭha) of 1 hasta 10 yava height of the Siddha Rāmacaṇḍi temple and mukhaśālā. In this basement the plinth (pāda) is 10 yava, the edge-moulding (kaṇi) 4 yava, the vasanta (scroll work border) 8 yava. Above this is a narrow berm of 10 yava width. In the lower wall the pañcakarma with other things is 1 hasta 6 yava.[2] Above the lower jāṅgha of 1 hasta 6 yava is a bandhanā of 11 yava and above that a lotus-leaf frieze (padma-patra-bandha) of 10 yava. There are four niches with images of 3 hasta height (the Pārśva-devatās).

LEAF 23 A

PL. 105

Writing : [The interior of the mukhaśālā is 14 hasta (?) square.

Mādalā Pāñji. (1) Mentions three pīḍhas and not only two, as they are also found on the design of this manuscript.

(2) pañcakarma of 2 hasta 6 yava, above that a jāṅgha of 2 hasta 6 yava and a bandhanā of 1 hasta 6 yava.

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* which is in reality the Mahāgāyatrī temple, see its description and design in Ms. 2.

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PL. 101-104 On the south and the north side it has mullioned windows (gavākṣa) 3 hasta high. In the gaiṇṭhāḷa the vijayadvāra has a width of 2 hasta 10 yava and a height of 6 hasta 10 yava. On the door-lintel it has a Lakṣmī-image and above it a stone with the nine planets. The pedestal inside the shrine is 5 hasta 3 yava broad (?). The Siddha-Durgā image inside this rekha-temple is 2 hasta 6 yava high.]

[The wall of this rekha-temple is 14 hasta high. It consist of three works which are everywhere 3 yava higher than those of the mukhaśālā. (Increased in this way) the gaṇḍi-bandhanā is placed 1 hasta higher up. From the corbelled roof (laharī-muda) upwards the whole spire of the temple is 22 hasta high. On top of it, on the gaṇḍi-beki (neck-part) there are four sedant lion-figures. Between them are four kanyās. The anuratha, the rāhā-pāga, the koṇaka and other parts are made as usual on rekha-temples. The neck (beki) is 1 hasta 5 yava high. On top it has a flange (rekhā) of 3 yava (encircling the neck), an amalaśrī of 1 hasta 10 yava (height) and over it a band (rekhā) of 3 yava. On this is a khapuri of 10 yava, a pedestal (baiṭhi) of 5 (or 9) yava. The foot of the kalaśa is 6 yava and the kalaśa 1 hasta 3 yava. Leaving a support of 3 yava, the cakra (emblem) on top has a diameter of 11 yava.[1]

PL. 99 Inside the shrine is an eight-armed image of Mahādurgā (aṣṭabhujā Mahādurgā)*]

Writing : [The wall of the mukhaśālā is on the same base of 1 hasta 10 yava, made of three elements. Above the berm there is a pañcakarma bandha of 1 hasta 3 yava, the lower jāṅgha is 1 hasta 6 yava; over this a bandhanā of 9 yava, an upper jāṅgha of 1 hasta 6 yava and a bandhanā of 8 yava. Above this a rājabandha. Over the rājabandha the pīḍha-roof projects by 1 hasta 10 yava. The first course of pīḍhas has six tiers, which together are 3 hasta 9 yava in height. On this is a row of dancing girls (Nāṭakanyās) of 1 hasta 6 yava. After one Nāṭakanyā one vajramuṇḍi (on the wall). (The second pīḍha-roof) has five tiers of together 2 hasta 6 yava height. Above this is a wall with vajramuṇḍis. The wall is 1 hasta 4 yava high.]

(Here mention of the third piḍha-roof of three or four tiers which is shown on the drawing has been omitted, like on the Nāṭamaṇḍapa.)

Mālalā Pāñji (1) Jāṅgha 2 hasta 6 yava, meḷāna 2 hasta 11 yava, gaṇḍi 22 hasta, beki 1 hasta 8 yava, alāśri 1 hasta 10 yava, khapuri 10 yava, kalaśa pāda 6 yava, kalaśa 1 hasta 3 yava, cakra 11 yava, all together 52 hasta 11 yava. In the shrine a seated image of Rāmacaṇḍī.

In reality it was a ten-armed image of Mahāgāyatrī, the Śakti of Mahābhāskara, as it is shown in the manuscript No. 2 on the Devī temple.

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[Then there is a neck-part (muṇḍi-beki) of 1 hasta, a piṇḍi (pedestal) of 10 yava and a khapuri in form of lotus-petals (padma-khapuri) of 10 yava. Above these there is a flat āmalakī (dhāra āmalaki) of 4 yava, a khapuri of 11 yava, a pedestal of 6 yava and a kalaśa (dadhinauti) of I hasta 1 yava. The four sides of the ceiling are made with corbels (muda-cālas) reaching up to the second pīḍha. In front of the mukhaśālā there is a corbel-roofed hall (gharalaharī-muda), of 7 hasta 10 yava height and 6 hasta width, supported on two pillars of 4 hasta 4 yava, and with images of Gaṅgā and Yamunā on their front. Above it has a flat roof (baiṭhi cāla).*

LEAF 22 A *Design of the Gate-temple (dvāra-gumuṭa) .*

LEAF 23 A
PL. 3
PL. 103 Writing on the side starting from below : [Plinth (pītha-dhāra) 1 hasta, pañcakarma 2 hast 4 yava, lower wall (talajāṅgha) 2 hasta 4 yava, bandhanā (roll-moulding) 1 hasta 9 yava (?), upper wall 2 hasta 6 yava, the uppermost string course (bāḍa-bandhanā) 2 hasta 10 yava. Height of the first pīḍha 2 hasta 4 yava, the wall 1 hasta 5 yava, the second pīḍha 1 hasta 10 yava, the wall 1 hasta, the third pīḍha 1 hasta 4 yava, the neck (beki) 1 hasta 4 yava, the padma-khapuri śrīmundi's height 1 hasta 3 yava, alāśri 10 yava, khapuri 10 yava, kalaśa 1 hasta 6 yava. This is the gate-temple (dvāra-gumuṭa).] (Measurements, especially in the wall-part appear confused).

LEAF 21 B Writing : [The gumuṭa of the eastern gate has two gate-lions (dvāra-siṁha) at the door-steps of 3 hasta 8 yava. The double-roofed (do-cāliā) elephant-gate (in the north) is sapta-pāyā (of seven feet : meaning not fully grown, only half-grown), the Horse-gate (in the South) is sapta-pāyā. All these sapta-pāyā pīḍha temples are set into the compound-wall, (which encloses) the kitchen-establishments, the main double temples (jodāre paruśa deuḷa), and the surrounding maṇḍapas (beharaṇa maṇḍapas).]

LEAF 22 B *Design of the kitchen-building (roṣa-deuḷa), groundplan and elevation.*
PL. 3

PL. 103 Writing inside : [agaṇā, piṇḍi-ghara, roṣa, (courtyard, platform, kitchen),] (groundplan incorrect)

* According to the manuscript on the Mahāgāyatrī Devī temple it was an elongated roof on pillars, covering the front-platform, where it was supported by another pair of pillars. The images of Gaṅgā and Yamunā seem to have adorned the inner pillars by the side of the doorway. See Plate No. 99

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PL. 101-104 On the south and the north side it has mullioned windows (gavākṣa) 3 hasta high. In the gaiṇṭhāḷa the vijayadvāra has a width of 2 hasta 10 yava and a height of 6 hasta 10 yava. On the door-lintel it has a Lakṣmī-image and above it a stone with the nine planets. The pedestal inside the shrine is 5 hasta 3 yava broad (?). The Siddha-Durgā image inside this rekha-temple is 2 hasta 6 yava high.]

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In reality it was a ten-armed image of Mahāgāyatrī, the Śakti of Mahābhāskara, as it is shown in the manuscript No. 2 on the Devī temple.

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[Then there is a neck-part (muṇḍi-beki) of 1 hasta, a piṇḍi (pedestal) of 10 yava and a khapuri in form of lotus-petals (padma-khapuri) of 10 yava. Above these there is a flat āmalakī (dhāra āmalaki) of 4 yava, a khapuri of 11 yava, a pedestal of 6 yava and a kalaśa (dadhinauti) of I hasta 1 yava. The four sides of the ceiling are made with corbels (muda-cālas) reaching up to the second pīḍha. In front of the mukhaśālā there is a corbel-roofed hall (gharalaharī-muda), of 7 hasta 10 yava height and 6 hasta width, supported on two pillars of 4 hasta 4 yava, and with images of Gaṅgā and Yamunā on their front. Above it has a flat roof (baiṭhi cāla).*

LEAF 22 A

Design of the Gate-temple (dvāra-gumuṭa) .

LEAF 23 A
PL. 3
PL. 103

Writing on the side starting from below : [Plinth (pītha-dhāra) 1 hasta, pañcakarma 2 hast 4 yava, lower wall (talajāṅgha) 2 hasta 4 yava, bandhanā (roll-moulding) 1 hasta 9 yava (?), upper wall 2 hasta 6 yava, the uppermost string course (bāḍa-bandhanā) 2 hasta 10 yava. Height of the first pīḍha 2 hasta 4 yava, the wall 1 hasta 5 yava, the second pīḍha 1 hasta 10 yava, the wall 1 hasta, the third pīḍha 1 hasta 4 yava, the neck (beki) 1 hasta 4 yava, the padma-khapuri śrīmundi's height 1 hasta 3 yava, alāśri 10 yava, khapuri 10 yava, kalaśa 1 hasta 6 yava. This is the gate-temple (dvāra-gumuṭa).] (Measurements, especially in the wall-part appear confused).

LEAF 21 B

Writing : [The gumuṭa of the eastern gate has two gate-lions (dvāra-siṁha) at the door-steps of 3 hasta 8 yava. The double-roofed (do-cāliā) elephant-gate (in the north) is sapta-pāyā (of seven feet : meaning not fully grown, only half-grown), the Horse-gate (in the South) is sapta-pāyā. All these sapta-pāyā pīḍha temples are set into the compound-wall, (which encloses) the kitchen-establishments, the main double temples (jodāre paruśa deuḷa), and the surrounding maṇḍapas (beharaṇa maṇḍapas).]

LEAF 22 B
PL. 3

Design of the kitchen-building (roṣa-deuḷa), groundplan and elevation.

PL. 103

Writing inside : [agaṇā, piṇḍi-ghara, roṣa, (courtyard, platform, kitchen),] (groundplan incorrect)

* According to the manuscript on the Mahāgāyatrī Devī temple it was an elongated roof on pillars, covering the front-platform, where it was supported by another pair of pillars. The images of Gaṅgā and Yamunā seem to have adorned the inner pillars by the side of the doorway. See Plate No. 99

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Writing on the left side : [This is the kitchen-building. Eight kāṭhi away from the eastern corner bastion (guruja) of the compound-wall, in the south-eastern corner (Agni-corner), it is 74 hasta in length and 54 hasta in breadth (dīrgha and prati). In front is a 24 hasta wide open courtyard (jogaṇiā agaṇā.) At the back there is a 30 hasta wide and 74 hasta long portion containig five rooms. On the sides there are 15 hasta wide rooms with two doors, one with the ovens and one with a platform for keeping the cooking vessels (hāṇḍirakṣā-piṇḍi). There is a store-room of 26 hasta, then, there are two more rooms of $7\frac{1}{4}$ hasta with ovens for making sweets (pīṭha-cūlli) and one of 6 hasta for maintaining the fire (agni-rakṣā).* On the wall are upright mullioned windows (ṭhia-jāli-gavākṣa) of 2 hasta height. Above this a bandhanā of 2 hasta 6 yava. Above that another row of mullioned windows and then the corbelled ceiling-roof (laharī-muda) made of stone-slabs (pathara-pāṭa). In the courtyard there is an image of Gaṇeśa.** On the North side there is a well connected (with the kitchen) by a paved covered path (chekāvāṭa).]

LEAF 21 B

Writing : [These are the measurements of the Padmakeśara temple and mukhaśālā, the glory of the Arkakṣetra, built by the Sūtradhara Raṅgaināhaka Viśvakarma and Gadei Matra Mahāpātra. These are the measurements in hasta and kāṭhi.

1 kāṭhi=7 pa (1 pa=$\frac{1}{4}$ hasta)***]

[Since aṅguli measurements may be bigger or smaller=(unreliable) 12 yava were given for 1 hasta. Yava is the measure of the last member of the thumb. 1 yava has 8 girā, the size of a rice-corn.]

LEAF 21 B

Colophon of the text :

[Everything is drawn (rekhā vasāṇa) according to the original measurements, in the Sala era 1018 (1610 A.D.), on the 9th day of Kanyā, in the fifth aṅka of Puruṣottama Deva Mahārāja.

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* Neither groundplan nor description of the disposition tally with what is still visible on the ground. (see *App. No 19.*)

** Now on the Madhipur temple.

*** kāṭhi are generally only 1·1/4 hasta, but here they appear to be 1.3/4 hasta.

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True copy, Sarvamaṅgalā.*

Since Bhīma even sometimes failed on the battlefield, and since at times even the minds of Munis go astray, therefore, whether this is right or wrong, no blame should fall on me.]

Colophon of the Mādalā Pāñji

OM Śrī !

The Rāja Narasiṁha Deva Gajapati, after having built the Padmakeśara temple and mukhaśālā and having enjoyed his reign for some time died (surrendered to Hari). After that the present Puruṣottama Deva Rāja gave orders that a survey be made of the temples and the lands in their possession in the various districts of Orissa. In consequence of this order, fourteen officers (Kāryā) went to make a survey of the temples. One copy of the present report on the Padmakeśara temple was deposited in the great Puru ṣottama temple.

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* Name of a tāntric folk divinity, which people use to call to witness for the truth of a statement.

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TRIKĀLA MAHĀMĀYĀ ARCANĀ VIDHI

RULES FOR THE THRICE DAILY WORSHIP OF MAHĀMĀYĀ

MANUSCRIPT OF 16 LEAVES

Showing a full design of the temple of Mahāgāyatrī Devī with the yantras underlying its construction, the figures of the Devī, the twelve Ādityas and the nine Planets. Sanskrit text in Karaṇi script containing the hymns to the Devī and the pūjā offered to her.

Found in the house of Jagannātha Tripāṭhī in Kurujaṅga through the help of Śrī Vāsudeva Ratha of Purī.

Additional Dhyānas culled from the Sūrya Tantra.

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TRIKĀLA MAHĀMĀYĀ ARCANĀ VIDHI

(Rules for the thrice daily worship of Mahāmāyā)

Hear the Brahmavidyā, the rules for the worship of Gāyatrī :
According to these rules the Smārta Brāhmaṇas should perform their daily pūjā. (PL. 99) 1

By worshipping Gāyatrī, the Mother of the Vedas, all sins are destroyed.
By doing japa (repeating the name) of Gāyatrī the daily failings are redeemed. 2

The best time for the morning devotions to Gāyatrī is when the stars are still visible,
Devotions done when the stars have disappeared is of lesser merit,
When done at the time of sunrise it is considered the lowest. 3

The best time for the evening devotions (to Sarasvatī) is, when Bhāskara is still visible,
When done after the Sun has set it is considered inferior
And lowest, when done after the stars have appeared. 4

When the Sun is above the head and the shadow is below the body, the time is best for the midday devotions (to Sāvitrī). 5

Sūrya is manifestly the eye of the world, the eternal source of fire and lustre,
The heat (tejas) he emanates is the origin of all the world's beings. 6

In the orb of the Sun Brahmā, Viṣṇu and Śiva are united,
In these three Devas the all-pervading supreme divinity is manifested. 7

The energy in the orb of the Sun is Gāyatrī, the eternal Mother of the Vedas,
The Mother of all the Letters, Mahāmāyā is the source of all Power. 8

By the activity of the three Guṇas, successively evolving from the Origins,
The Devī, the essence of Jñāna (transcendent knowledge) manifests herself in the form of the three Devas. 9

On rising, in the form of Brahmā, she activates the creation of living beings,
As Brahmaśakti Gāyatrī is Sūrya's supreme Mātrikā (Mother of all creation.) 10

At midday, in the form of Śaṅkara, she is the all-consuming fire of dissolution.
Sāvitrī, the great Śakti is the very form of Mahākāla. 11

At evening time the Śakti in the form of Viṣṇu is manifest as Sarasvatī.
These are, varying according to time, the three Tejaḥ-Śaktis (Sūrya Śaktis). 12

On the right side of Sūrya's chariot the best devotee worships her
In the form of the Seed of Manifestation (Māyā-bīja) 13

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This Śakti of the Sūrya-maṇḍala, Gāyatrī, is the Mother of Yoga,
The Jñāna-Śakti manifested in the form of Sūrya. 14

Icchā-Śakti is Uṣas and Krīyā Śakti is Sandhyā, the cooling one,
These are the aspects under which the two Śaktis should be worshipped by the Brāhmaṇa. 15

From Gāyatrī are produced all living beings, humans, animals, trees,
Mountains, moveable and immoveable things. 16

Established on the lotus-mouth of the Lotus born (Brahmā), the Dispenser of Life-Energy,

She should be worshipped with great diligence at the mountain of the rising Sun (Udayācala). 17

The powerful Sāvitrī, the other Śakti is dessicating all living beings by heat,
Water, Earth and Ether are therefore withering away. 18

At midday the Brāhmaṇa worships this beautiful one as the Śakti of Śambhu,
That Devī, the highest Śakti is the Self of the soul, the Auspicious. 19

At evening time the excellent Devī Sarasvatī is worshipped, the Śakti of Viṣṇu, the Remover of all imperfections from living beings. 20

All these Mātṛs should be worshipped in the course of the day,
These three great Śaktis are the essence of Brahmavidyā. 21

Just as the Sun travelling in the ether spreads the fire of his rays,
So does Gāyatrī bestow the fire of the spirit īn the ether (inner space) of the heart. 22

As the Sun travels in a chariot through the ether,
So do all letter (varṇa-mātṛkā) circulate within the chariot of the body. 23

As the Sun in the ether absorbs the dust (impurities) of the earth,
The recitation of the Gāyatrī-letters annihilates all sins. 24

Without meditating on Gāyatrī the worship of Sūrya is fruitless,
Useless is all worship of Mārtaṇḍa, when done without the recitation of the Gāyatrī. 25

On the right side of Sūrya, according to rules,
Mahāmāyā Gāyatrī should be worshipped. 26

Aruṇa in front (east), Mitra to the right (south) and Pūṣan īn the back (west)
Haridaśva in the north are worshipped in this best of maṇḍalas. 27

GĀYATRĪ YANTRA

The yantra for the Vedamātṛkā (Gāyatrī) has ten āvaraṇas (enclosures).
In the centre is the bindu within an eight-petalled lotus. 28

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Around this a triangle and then a circle : this is the third enclosure.
The fourth enclosure is a ṣaṭkoṇa (hexagram), the fifth is a circle. 29
The sixth is an eight-petalled lotus, the seventh again a circle,
The eighth is a lotus of twenty-four petals, (the ninth a circle), 30
And then the bhūpura, these are the ten enclosures. In the centre is Gāyatrī.
On the three points of the triangle are Brāhmī, Māheśvarī and Vaiṣṇavī. 31
On the points of the hexagram are Ravi and Prajñā, Bhānu and Prabhā,
Bhāskara and Sandhyā, the Devas with their Śaktis. 32
In the eight-petalled lotus are Prahlādinī, Prabhā, Nityā, Viśvambharā,
Vilāsinī, Prabhāvatī, Jayā and Śānti. 33
In the 24-petalled lotus is the entire Gāyatrī mantra (of 24 syllables)

OM TA TSA VI TU RVA RE ṆYAM BHA RGO DE VA SYA DHĪ MA HI DHI YO YO NAḤ PRA CO DA YĀT 34

MAHĀGĀYATRĪ DHYĀNAM

Of golden colour, adorned by a jaṭā-mukuṭa, by hāra and keyūra, by graiveya and yajña-mekhalā (belt worn at sacrifices), 35
Wearing saffron (geruā) cloths, seated in lotus posture on a lotus,
In her right hands holding cakra (discus), gadā (club), dhanu (bow),
akṣamālā (rosary) and making the abhaya gesture, 36
In her left hands holding śaṅkha (conch), śara (arrow), padma (lotus),
kamaṇḍalu (water-pot) and making the varada gesture,
She should be worshipped with all these attributes. 37

SĀVITRĪ YANTRA

In the centre is the Brahmāṇī yantra with a beautiful bhūpura, inside which there is a square (koṇikṣetra) standing on its point : These are the outer enclosures. 38
In the middle is a small circle surrounded by a hexagram,
Around this is a lotus of eight petals. 39
On these petals are : Svadhā, Svāhā, Dhārā, Tejā, Prajñā, Dhī, Niṣṭhā,
Dhyānā : there these Śaktis have to be worshipped. 40
Around this there is again a circle. This is the most important yantra for the worship of Sāvitrī.
The Sādhaka who steadily worships her at midday, will obtain siddhiṣ. 41

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SĀVITRĪ DHYĀNAM

She is Brahmāṇī with four faces, of red colour,
In her hands she holds akṣamālā (rosary), balaya (ring), kumbha (water-pot) śruva and sruc (two kinds of sacrificial laddles),
With her hands she makes the gestures of abhaya and varada,
She is in the prime of her youth and very beautiful. 42-43

SARASVATĪ YAṄTRA

In the central part of a rectangular field there are two broad cakras with lotuses of four petals,
On the right side is Vināyaka (Gaṇeśa), on the left side Sāradā (Sarasvatī). 44
In front there are six small fields, and at the back equally six,
On both sides there are two and two, for sixteen Śaktis all together. 45

SARASVATĪ DHYĀNAM

Seated upon a haṁsa, holding kumbha and akṣamālā, of white colour, she is Vākśakti (Power of the word) and Sat-kriyātmikā (Embodiment of good).
Such are the figures to be worshipped on these yantras. 46
In the evening the Brāhmaṇa should worship the white Sarasvatī
Together with Vināyaka, thus he will obtain all wisdom (vidyā).
He should worship all the sixteen Mātṛkās with Vināyaka. 47-48
First Gaṇapati, then Gaurī, Śacī, Medhā, Sāvitrī, Vijayā, Jayā,
Śrī, Dhī, Puṣṭi, Tuṣṭi, Svadhā, Svāhā, Kṣāntī, Śānti, Nidhi, Dhiman (?).
These are the Kaulamātṛkās, also called the Lokamātṛkās.
The enlightened ones worship them according to these rules.* 49-50

(Here follow details of instructions for the pūjās, which are omitted.)

BRAHMAGĀYATRI DHYĀNAM AND RATHA-ŚAKTI DHYĀNAM

(from Sūrya Tantra)

Of silvery white complexion, the ears adorned with golden rings,
With a fresh sweet smile and a body that is the essence of all siddhis, 13
Wearing a mukuṭa on the head surmounted by half a hairknot and adorned by a half-moon,
And a garment of geruā colour, she is the impersonation of tapasyā. 14

* See App. No. 19

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She wears a sacred thread and on her hip a belt studded with gems of many colours,

The Gāyatrī-mantra is inscribed on the twenty-four petals of the lotus, on which she is seated. 15

In her right hands are discus, trident, lotus and rosary,

In her left hands conch-shell, a beautiful ḍamaru, the Vedas and a lotus. 16

O Gāyatrī ! Supreme Śakti (Parātma-Śakti), residing in the maṇḍala of the Sun, you, the Mother of the Vedas, protect all the worlds ! 17

This is the Parātparaśakti Gāyatrī Sauramātṛkā (Mother of the Śauras)*

In her complete or absolute form there are three (aspects), according to the three guṇas. 18

Sūrya is Dhātā (Brahmā) at the time of rising, at midday he is Maheśvara,

At sunset he is Viṣṇu : these are the three aspects of the Lightgiver (Prabhākara). 19

Dhātā is worshipped with the Gāyatrī, Śiva with Sāvitrī,

And Nārāyaṇa with the Śakti Sarasvatī. 20

These three Śaktis have to be worshipped daily at the times of junction.**

The Sūrya-tattvas should be meditated together with their Jyotiḥ (light)-Śaktis in their proper order. 21

These Jyotiḥ-Śaktis are eight : Dīptā and other Guṇamātṛkās.

At the time of Āvaraṇa-pūjā*** they should be worshipped with their respective mantras. 22

Then, in their proper time, at sunrise and sunset, Uṣas and Sandhyā, the two Śaktis Chāyā and Māyā should be worshipped. 23

Uṣas is of orange colour, Sandhyā has the colour of dying fire (nirvāṇa-pāvaka=pale red),

Chāyā is like a raincloud, Māyā like a golden ray of light. 24

These four Time-Śaktis (Kāla-Śakti), decked with various ornaments,

Hold in one hand a rainbow (dig-cāpa) and a lotus in the other, or some times they make abhaya mudrā. 25

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* by the Vaiṣṇavas she is called Yogamāyā, by the Śaivas (Kaulas) Ambikā or Kālī.

** the Udaya sandhyā at sunrise, the Madhyamā sandhyā at midday, the Sāyam sandhyā at sunset, but sometimes a Brāhmī sandhyā is added early morning before sunrise.

*** pujā of the surrounding attending divinities.

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These different emanations of the Devī are the four Śaktis of the chariot (Ratha-Śakti)

They are Light (Tejaḥ-Śakti), Penetrating Power (Gati-Śakti), Heat (tapas) and Illumination (jñāna). 26

Tejaḥ-Śakti is of golden colour, Gati-Śakti is pale red, Tapaḥ-Śakti has the colour of pungent smoke (uṣma), Jñāna-Śakti has a shining white complexion. 27

All, adorned with various ornaments, hold a lotus in their hands and make abhaya mudrā.

As a reflection of the circle of Ādityas these Śaktis should be worshipped.

Without worshipping the Śaktis the pūjā of Ravi will be fruitless. 28

As are the forms, the times and the qualities of Ravi, such are the various aspects of the Śaktis. 29

(These Śaktis appear to be those represented on the sides of the Pārśva Devatās in the upper Niśa temples of Koṇārka.)

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BAYA CAKAḌĀ

ACCOUNTS AND CHRONICLE OF THE BUILDING OPERATIONS OF THE PADMAKEŚARA TEMPLE AT KOṆĀRKA

TRANSLATED FROM TWO PALM-LEAF MANUSCRIPTS IN ANCIENT ORIYA LANGUAGE AND IN KARAṆI SCRIPT.

Ms. No. I. Leaves I, III–XX, XXII–XLVII, XLIX–LXXI
Found in the Gaḍacaṇḍī Devī Temple in the village Rupāsa

Ms. No 2. Leaves II, XXI, XLVIII, LXXII
Originally belonging to Brajakiśora Bhramarabara of Kilā Bayāḷisbāṭi

Found in Ayurbaṅga Maṭha through the courtesy of Mahant Rāmratan Dāsa

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LEAF I

This is an account of the expenditure incurred in the construction of the Padmakeśara Temple at Koṇārka.

[Śrī Śubham Astu.]

Vīraśrī Gajapati Gauḍeśvara Navakoṭi, Karṇāṭa Utkala Vargeśvara Vīrādhi-Vīravara Bhūta-Bhairava Prabaḷa-Pratāpī* Mahāśrama Narasiṁha Deva, towards the end of the fifth aṅka** of his victorious, auspicious reign, decreed that a temple in the form of a chariot should be built for the Paramasūrya Deva in the grounds of the Arkakṣetra. (See also App. No. 13)

When the Mahāśrama reached the camp of Laṅkapaḍā, accompanied by twenty-four officials and eight feudatary chiefs (sāmanta), seven hundred śilpis and seven ojhās (Iron-casters) were assembled there for starting the construction of the temple. In the presence of all these the Bhuvanamohana Purohita Bhuvaneśvara Rājaguru performed the Maṅgalāropaṇa Ceremony.*** He took a consecrated cloth from Śrī Puruṣottama and offered it to the Mahāśrama as a prasāda. After this the Mahāśrama divided (the seven hundred śilpis) into three groups. To the head of each group he gave a turban-cloth in token of appointment. The Mahāśrama gave a cloth to Sadāśiva Sāmantarāya Mahāpātra and appointed him as the Chief Architect (Sūtradhara). The Sūtradhara prostrated (made niuchāḷi) before the Mahāśrama.

The Sūtradhara appointed Gadei (Gadādhara) Mahāpātra as the executive Architect (karmakāra) and Superintendent of works (parichā), Vidyādhara Mahāpātra was appointed as the Chief of Image-maker (mūrtikāra), Aiṇṭhā Mahāraṇā as the Head of Stone-masons (swāṅṣyā). Rājiva Mahāraṇā was appointed for making scaffoldings, Bindu Mahāraṇā as plasterer (cunurā), Puriā Mahāpātra for iron-casting (kamārakaṇṭa). These were, including the Sūtradhara, the seven appointments.

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* These were later titles, most probably introduced by the copyist, see Leaf XXXIX, 6, note.

** The regnal years of the Gaṅga Rulers of Orissa were counted as aṅkas. In this system the first year and all years ending with a 0 or with 6 were omitted. The aṅkas were counted from one Bhādra śukla dvādaśī, which was called the Sunyā day to the next Sunyā day.
It is now generally accepted by historians that the reign of Rājā Narasiṁha I began in 1238 A. D. and the period between his coronation and his first Sunyā day would have been considered as his second aṅka. His third aṅka therefore would have started on the first Sunyā day, Sept. 1238. A. D. Thus it works out as follows :

September 1238 to Sept. 1239=3rd aṅka (first full year after coronation)
Sept. 1239–Sept. 1240=4th aṅka (second year after coronation)
Sept. 1240–Sept. 1241=5th aṅka (third year after coronation)
Sept. 1241–Sept. 1242=7th aṅka (fourth year after coronation)
Only in Ms. 2, which is a later copy of the Baya Cakaḍā, the 7th aṅka is called the 6th aṅka.

*** See note on Leaf II, 1.

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After thus distributing the cloths (making the appointments) the Mahāśrama put the Daḷabeherā of Rupāsagaḍa in charge of the camp-administration, and Haricandana Bhramarabara of Kilā Bayāḷisbāṭi in charge of the accounts and the maintenance of a store-room and treasury. After having made all these appointments the Mahāśrama went back to Biḍānāsī (Cuttack). As per my appointment I am recording the accounts (Baya cakaḍā). In the stores there are gold-pieces (aśrapi), coins (cakimāḍha) and grains.

[Śrī Śubham Astu !]

1. In the seventh aṅka* on the tenth day of Kanyā śukla pakṣa, on a Thursday, for Bhūmiśuddhi Maṅgaḷāropaṇa** (ceremonial purification of the ground) Rājaguru Bhuvaneśvara received dakṣiṇā.	3 māḍha gold 7 pairs of silken cloths 14 elephant-marked gold-coins.
2. To the chief śilpi for the camp-maintenance of the śilpis :	3040 māḍha
3. To the iron-workers (ojhās) camp-maintenance :	3040 māḍha
4. To the stone-workers (pāiṭāḷas) camp-maintenance :	1720 māḍha
5. To Narāyaṇa Nāyaka and Rāmapṛṣṭi towards 50 bullock carts :	5000 māḍha (elephant-marked)
6. To the hātiāḷa Nāyaka Biśuni Duāri :	300 māḍha
7. For supplying 1500 timber beams to the Daḷabeherā of Bāṇapura :	100 māḍha

LEAF II (MS. 2)

1. To measure out the land for the temple and the jagamohana Gadādhara Mahāpātra received :	1 kāhāṇa kauri 3 māḍha
2. To level the ground under Vidyā Mahāraṇā's supervision 124 people worked 17 days, and under Rāma Nāyaka 22 people worked 2 days, they received :	37 māḍha
3. On Daśamī of Mārgaśīra śukla pakṣa in the auspicious reign of the Mahāśrama, for measuring out the plan of the temple with the thread, Sūtradhara received :	1 māḍha

* *Sixth aṅka, Ms. 2.*

** Propitiatory rite made with small offerings from a tray with the recitation of Vedic mantras and concluding with aṣṭāṅgapraṇāma (prostrations).

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4. For the first Astrapūjā* : 1 pair of cloths
5. Stones were quarried in Kerāṇḍimāḷa and Ghaṇṭaśiḷā under Buḍhāleṅkā's supervision. The work was paid from Śrīkūrma Treasury.
6. For making tools : 483 pointed chisels (guṇitara). 326 indented chisels (dāntiguṇitara), 130 flat chisels (rampā), 308 mallets (korāmuṇḍiā), 32 sūtākāṭhi (wooden plates with a hole for passing the measuring thread), 15 sūtākāṭhi of $2\frac{1}{2}$ hasta, and koṇacautakāṭhi (measuring rod with a right angle), the carpenter Bhikāri** of Biḍānāsī received : 230 māḍha
7. For 4 paṭharachandāphāsa (contrivance made of ropes for lifting big stones) Dāma Mahāraṇā received : 34 māḍha
8. To make 37 chekasikā of 5 hasta (planks attached to long ropes) for sinking stones into the foundations, to make 12 jhapaka (crane worked by a winding-wheel) Bāsu Ojhā received : 30 māḍha
9. 630 hoes of different shapes (phāuḍā) and pharaka (broad) phāuḍā from Biribāṭi.
10. Nidhi Dāsa of Rāhāṅga sent 240 (coils of) ropes for sāṅgi (sāṅgi-dauḍā) : 37 māḍha from Puruṣottama
11. 163 bullock-carts of māṅkaḍā stones came from Tāpaṅga, Mamu Hill and Chairamuha, the Pāik who came with them received : 2 māḍha
12. For squaring and arranging the stones 82 persons worked 12 days and after delivering them to the tallyman they received : 1 māḍha (?)
13. The Daḷabeherā of Aṇḍiā (near Nimāpaḍā) sent 40 sagaḍa. He gave the material (wood) and the carpenter received : 20 māḍha
14. Along the land-road from Puruṣottama to Padmakeśara two water-tanks were made, expenses : 82 māḍha
15. Sūtradhara received : 10 māḍha
16. From Ghaṇṭaśiḷā Hill 130 bullock-carts of stones of 1 muṣṭi were sent via Malaguṇī river and were paid : 40 māḍha
17. 17 pathuriās placed them on the south-side and received : 34 māḍha
18. Near Gaḍarupāsa a camp was made for lodging : 36 māḍha

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* Pūjā to instruments and tools. This is a Trikāla pūjā, performed morning, midday and evening, for which new cloths were required every time. See Leaf XVII, 11.

** The chisels were certainly made by iron-workers, but the order may have been passed through the carpenter.

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LEAF III

1. Thirty hātiāḷas received : 300 māḍha
2. For the use of the officers (Nāyaka) eighty horses were kept in the charge of Viṣṇu Bhañja and Sukhi Rāuḷa, they received : 180 māḍha
3. To the agents (Baḍajenā=administrator of 5 villages) of the Mahāśrama, who had gone all over Uḍradeśa to engage stone workers : 103 māḍha
4. Fifteen pāitāḷas had collected bamboo from Nairi, Nāgapura, Baṇībandha and other places :
   Best root-pieces (mūḷi)=2200 pieces
   Medium quality (sariṅgi)=250 pieces
   Ordinary (kaṇṣābāḷiṅgi)=35030 pieces
   Their expenses for travelling and cutting : 18 māḍha
5. To Dāmodara Baḍajenā, Aṅgāi Nāyaka (personal agent of the Rājā), the Paramabiśoi and Maṇibiśoi and others for having selected stone-quarries : 830 māḍha
6. Under the direction of Sadānanda Gupta the Kāduā canal was dug from the Sola river to the Padmakeśara gaṇḍa (pool), passing at the back of Rupāsa and reaching the West side of the Padmakeśara temple. For this work the charges were : 8340 māḍha
   (see Leaf. IV, 1)
   Dharmu Teleṅgā and other 834 people with elephants received this payment.
7. Under the direction of Vīra Samartha 720 cāpas of four boats. 22 hasta long and 2 hasta broad, 121 similar cāpas of 3 hasta wide boats, 40 kheṭas of three boats were made of gambhāri wood by 180 carpenters. (In this work were used) 280 pieces of timber from Damarkhaṇḍa, 4803 pieces of timber from other places.
8. In the fifth aṅka* of the Mahāśrama's reign, the groundplan of the Padmakeśara Mahāratha temple had been measured out with the thread by the Sūtradhara Sadāśiva Sāmantarāya Mahāpātra, Gaṅgā Mahāpātra and Gadei Mahāpātra. They stayed at night at the Rupāsa camp. For taking them back and forth the palanquin-bearers received : 13 kāhāṇa kauri
   The workers received : 10 gauṇi

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* *Sixth aṅka, Ms. 2.*

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9. On Pauṣa Pūrṇimā* Dāma Baḍajenā recruited people for constructing the temple :

   from Khileśvarī Daṇḍapāṭa 30 strong youngmen (bheṇḍā), from Brahmeśvara Ḍiha 120, from Pāikapaḍā 250, from Varuṇāibiśe 400, from Paraṅga 120, from Koṭhadeśa 230, from Rāḍasa 304, from Biḍānāsī 180, from Basimaṇḍala on the Mahānadī 140, from Nasika Hill 230, from Saṅghadrigaḍa Hill 130, from Nīḷādrigaḍa 20, from Viṣṇupūra 130, from Pāṭapūra 40.

   Out of these, 530 youngmen went with the Mahāśrama to Vijayakoṇḍa (Vijayavada) to join the army.** The rest were lodged in the Rupāsa camp and received for one year's victualling : 170 bharaṇa paddy
   12 māḍha
   1430 kāhāṇa kauri
   140 coins elephant-marked

10. For conveying boats from Narāja-paṭhā (small island near Cuttack) through the Mahānadī Maṇi Biśoi received : 18 māḍha

11. On Makara Saṅkrānti the wood-suppliers of the entire area had delivered 354 cart-loads of timber into the charge of Dharma Biśoi :

12. The Paṭiā Biśoi delivered 1603 timber-beams from Jaṅkiāgaḍa and received : 130 small māḍha

13. The Dalabeherā of Dharmagaḍa sent 2304 timber beams 40 hasta long (as a present) by elephant-carts (hātīśagaḍa) through the Officers of Devagaḍa, who received as a gratuity : 30 māḍha

14. Thirteen elephant-cart drivers (hātiśagaḍiās) received : 80 māḍha
    3 bharaṇa rice

15. 1401 sal-wood beams were supplied from Kṛṣṇapalli Birijāyī forest through the Biśoi of Daśapura, he received : 180 māḍha

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* *In the sixth aṅka, Ms. 2.*

** The Liṅgarāja temple inscription of Narasiṁha Deva I places his war against Gaṇapati, the Kākatiya King in or before the 4th year after coronation (sāmrājyābhiṣeke catūrtha samvatsara). This has been wrongly interpreted to mean the 4th aṅka. But the 4th year after coronation should be interpreted to mean the 4th year after expiry of three complete years. Thus according to the aforementioned entry on Leaf III, 9 the Pauṣa Pūrṇimā day on which 530 people originally recruited for work on the temple joined the army of the Mahārāja in Vijayakoṇḍa, was in the fourth year, that is to say in the 7th aṅka of the Rājā, corresponding to January 1242 A.D.

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LEAF IV

1. For digging a deep canal of 1702 hasta (length) for the transport of stones, to Dharma Śarmā of Teleṅgā : (see Leaf III, 6)	3000 māḍha
2. To Sukhi, the cāpadaḷai (navigator of the cāpas) food-allowance :	180 māḍha
3. For the Ātreya Brāhmaṇas of Vedapura, who gave instruction in Śilpa Śāstra, to Bandhu Ratha :	1 bāṭi land 1 māṇa land 10 sūrya gold (coins)
4. For (tying) scaffoldings : ropes from Rāhāṅga :	28 māḍha
Fine ropes :	30 māḍha
Oiled and powder-coated ropes for the pulleys :	30 māḍha
5. Small iron-pulleys to be fixed on these (kind of) cranes (kaḷa-gayaḷa) to Bhramara :	18 māḍha
6. For the pūjā on marking the foundations :	1 pair silk cloths 1 pair dhoti & caddar 2 sūryā gold māḍha 2 paṇa kauri
7. To 18 teams who under their chief, removed the sand for excavating the foundations 54 hasta deep and for removing the sand on both sides :	208 māḍha
8. To the labourers (swaṅsyās) for setting rough stones into the foundations :	304 māḍha
9. For filling (the foundations) with gravel to Raghu Ojhā :*	140 māḍha
10. For the pūjā on the groundplan (garbharekhāvasāṇa) by the Rājaguru (in the depth of the foundations) :	4 small gold coins 1 kāhāṇa 1 pāṇa (1260 kauri)
11. For constructing a sloping scaffolding of 12 hasta (height) for the pīṭha to a group of swaṅsyās and ojhās :**	50 māḍha
12. For 240 timber beams brought from Bāṇapura payment:	170 māḍha

* See App. No. 1.

** It should be noted that wherever scaffoldings are described during the entire course of construction, there is never any mention of a sloping ramp made of earth. There is no mention either of the tower having been filled with earth for supporting the construction, as was proposed by certain theories (Report, Archaeological Survey of India, 1902–3.)

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13. To the Biśoi of Bāraṅgagaḍa for supplying 1700 big pāṭaśāraṅgi bamboo poles from Raṇapura :	300 māḍha
14. For beginning building the base (pīṭha) on the 2nd day of the bright fortnight of Meṣa, in the 7th aṅka, to the śilpin :	400 māḍha
15. For building a scaffolding of 22 hasta :	230 māḍha (Ms. 2)
16. For conveying on bullock-carts and kaḷacaki...	4 māḍha
17. To the villagers of Ḍākaḍiha and Dhanitiri in recognition of their meritorious work :	1300 kauri
18. Balaśrī Jalandhara Deva Rājā came on the 14th day of Vṛṣa (Jyeṣṭha) to inspect the work and paid gratuities (piṭhākhiā=lit. for eating sweets) :	103 māḍha
19 Expenses for Baḍasiṁha's (Baḷaśrī's) camping :	400 kauri 3 māḍha
20. To the Sūtradhara for marking the outline of the pīṭha (rekhāvasāṇa) on the ground :	50 māḍha
21. To Gadādhara Mahāpātra for designing the wheels and their diposition :	40 māḍha
22. To 74 śilpin for building up the pīṭha :	3011 māḍha elephant-marked
23. To stone-cutters of Tāpaṅga for 41 cāpa-loads (of stones) :	2324 māḍha
24. For bringing 408420 stones from Arāgaḍa on fourheaded cāpas (with four boats) :	70460 māḍha
25. To Dāma Maharāṇā for 40 men doing fine chiselwork (sūci-kāṃa) on the pīṭha :	304 māḍha
26. For 33 big muguni stones (black chlorite) from Nīlagiri to Bṛndāpāṭa Rāurāuṇḍi Rājā of Khimuṇḍi :	2110 māḍha*
27. Gopinātha Baḍajenā made a present of 270 Regaḍākuṇḍā sandstones** and received as a fare-well present (bidāi) :	1 pair cloths
The barber (his servant) :	1 pair phulajharī cloths
28. For erecting temporary sheds on the work-site Golara Daḷa-beherā engaged 80 workers and received for them :	1 bharaṇa paddy 13 gauṇi muṅg 1 kāhāṇa kauri
29. Victualling charges for the śilpin :	11 bharaṇa paddy

* 220 māḍha (Ms. 2)

** From Tāpaṅga, see App. No. 14.

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30. On the first day of Mithuna of this 7th aṅka on account of caturmāsyā (four months' rainy season) the work was stopped. After settling the accounts of the workmen, they received as parting fees : 230 māḍha
and each one : 2 kāhāṇa kauri

31. To 30 watchmen : 30 māḍha
Out of these 10 went to Puruṣottama to see the Ratha Yātrā and were given : 13 kāhāṇa kauri

LEAF V

1. On the Saṅkrānti of Kakaḍā Rathasiṁha sent as present : 200 Gaṅga gold māḍha
20 bharaṇa
18 pauṭi paddy
18 pauṭi muṅg
8 pauṭi biridal

For 100 Śilpin : 100 pairs of Kumbharapaḍiā cloths

For the Sūtradhara : 1 pair silken cloths
For the Purohit : 1 pair cloths with broad border

Three bullock-carts drawn by Haripuriā bullocks brought these presents.

The brother of the Rājā who brought these things was given as a parting gift : 1 pair golden earrings and 1 golden chain

To the servants (who came with him) : 7 pairs of ordinary cloths

2. The Rājā of Mayūrbhañj, Cakradhara Bhañja, the Moon of the Bhañja Kula sent 100 (?) * Khiching Śilpis and 100 Khiching stones over the Mahānadī.** The men who brought the stones received : 3 māḍha
and each one : 1 pair of cloths

3. To the Teleṅgā Vaidya Buddhidhara and Vaidya Rāmacandra Sāmanta of Haḷadiā for buying medicinal stores : 20 māḍha
As salary : 30 māḍha

4. To the inspector Haricandana of Kilā Bayāḷisbāṭi towards travelling expenses in palanquin : 3 māḍha

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* Perhaps 10, see Leaf VI, 9.

** This could not be any other river than the Baitaraṇī in the first part of the journey, and in the second part the Citrotpaḷā river, which is a section of the Mahānadī.

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5. The scribe (ciṭāukaraṇa) sent letters twice to all the śilpis through 11 messengers, asking them to return to work. The 11 messengers engaged for this received :	3 māḍha 8 gauṇi
6. To the overseers of the temple construction, 8 people :	1 bharaṇa 3 gauṇi paddy 15 gauṇi muṅg 4 māḍha sūrya
To the superintendent Ānanda Paṭṭanāyaka :	11 māḍha
To the stone-tallyman :	2 māḍha
7. To the men carrying stones from the cāpas :	3 māḍha
8. Viśvanātha Mahāraṇā presented a portrait statue to the Mahāśrama Narasiṁha Deva. The expenses were :	20 māḍha
9. To the Sūtradhara :	11 māḍha
To Upādhi Nāyaka	2 māḍha
To the mūrtikāra Nāyaka (head of the sculptors) :	4 māḍha
To Aṅgāi Nāyaka :	2 māḍha
To the ciṭāukaraṇa victualling charges :	2 māḍha
To Sunā pathuriānī (sculptress) :	2 māḍha
To the hātiāḷa Nāyaka (head-mahout) :	2 māḍha
Total :	25 māḍha
10. For feeding the elephants :	4 bharaṇa paddy
11. For feeding the horses :	22 bharaṇa koḷath (pulses)
12. On the first day of Kanyā the śilpis returned to work, all together received :	230 māḍha
13. On Kanyā śukla daśamī the Mahāśrama came to inspect the works. For his staff the expenditure amounted to :	23 māḍha
For the Mahāśrama finest rice according to his choice :	5 gauṇi
14. The Mahāśrama gave awards :	
To Viśi Mahāpātra for making images :	1 Gaṅga gold coin
To one śilpi a special award (baḍati) :	1 Gaṅga gold coin
To the pathuriā Sundara Mahāpātra for making the compound-wall :	4 Gaṅga gold coins
To the image-maker Bhuvani pathuriā :	1 Gaṅga gold coin
To the jali worker Vidyādhara Ojhā :	1 Gaṅga gold coin
To Upādhi Nāyaka :	1 Gaṅga gold coin
To the inspector Bhramarabara Sāmanta ;	1 Gaṅga gold coin

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15. The leader of the cowherds Bhāgirathī Mahābhoi presented one herd (goṭha) milchcows. To honour the 100 cowherds* he received as a parting gift :	1 māḍha
To the cowherds in charge of 30 cows :	1 māḍha 11 gauṇi (paddy)
LEAF VI	
Fodder for the cows, coarse paddy :	35 pauṭi per month
1. One chief śilpin Mukunda Mahāpātra died of pneumonia. For his obsequies (Satkāra) to his son Dhaḍiā :	2 māḍha 30 māḍha
2. To the Brāhmaṇas for a pūjā to remove obstacles :	2 māḍha
3. For the Caṇḍipāṭha in the Gaṅgeśvarī Devī temple :	2 māḍha
4. On the eighth day of Kārttika śukla pakṣa 60382 stones of the size that two men can carry (dimaṇiṣyā) arrived from Jagadaḷa Hill, sent by Paryaṅga** Nāyaka. Labour charges :	203 māḍha
5. To 812 śilpin for work on the basement :	4213 māḍha elephant-marked
6. For carrying stones up to the scaffolding of the temple :	200 māḍha
7. Fodder for bullocks :	70 gauṇi paddy
8. To the bullock-carters :	1 bharaṇa 14 gauṇi paddy
9. The Rājā Cakradhara Bhañja of Mayūrbhañj sent 10 śilpin, for their food (bhātiā) :	28 gauṇi paddy
	12 pairs of cloths
	1 māḍha
10. Victualling charges for 140 pathuriās :	304 māḍha
11. The Rājā of Tigaḍa Maṇḍala sent 50 pairs of cloths. To the bringer were given as parting gift :	2 māḍha
12. The Rājā of Mayurbhañja sent five cart-loads of raw iron-lumps. To the buffalo-carters who brought them, victualling charges :	20 māḍha
13. For casting the iron a foundry was built, labour charges :	3 bharaṇa 5 gauṇi rice
14. To the chief iron-caster Mādhava Ojhā :	2 māḍha
15. For making earthen channel-moulds (nāḷas) to cast the iron girders, labour charges :	2 Gaṅga coins
	2 small māḍha

* Meaning the cowherd Community of the region.

** Paryaṅga=region between the Mahānadī and the Cilka Lake.

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16. To Surkham Mohammed for supplying 250 paḷa lead to admix to the iron : 210 silver Bādshāh sikkās taken in war

17. The renowned Sujā Mohammed of Bhadrak was ordered to smelt the iron and received : 40 māḍha

18. One śilpī from Caubhāga committed a theft in the store-room. For sending a Pāik after him : 15 gauṇi paddy

19. Cakradhara Muduli made and burnt earthen channel-moulds 40 hasta long and received : 2 bharaṇa paddy
22 gauṇi
4 māḍha gold

20. Balaśrī, the Chief Minister (Mahāmātra) sent 200 cart-loads of paddy (as a present).
The carters received : 40 gauṇi paddy
To the officers who accompanied them, as parting gift : 2 māḍha

21. Constructing a furnace for smelting iron in the iron-yard : 22 māḍha

22. 25 packets of tāṅgaṇā (borax) for mixing with the iron : 5 māḍha

23. Suki Ojhā made 21 curved copper-pipes : 5 māḍha

24. For 4 copper crucibles (pimpā) of the size that two men can carry (dibhāriā) : 40 māḍha
For welding 7 long-stemmed copper funnels (kāhāḷinaḷa) onto them at intervals of four aṅgulas : 40 māḍha

25. For four channels (nāḷi) of three men's load (tinbhāriā) and four channels of two and a half men's load (aḍhāibhāriā) to Basu Ojhā and Sujā Mohammed : 22 māḍha

26. For preparing and setting up stone-posts in front of the bellows : 50 māḍha

27. Mahant Beṇīdāsa sent 25 cart-loads of coconut fibre through Rāmdāsa and Surasiṁha, who received : 20 māḍha
1 pair of silken cloths

28. To Vīra Ojhā for casting the iron-girders : 80 māḍha

29. On Kārttika śukla navamī* some śilpin came from Khurdāgaḍa to cut the laterite (tuff=mānkaḍā) stones. Their share from the Paścima Duāi camp was : 20 gauṇi rice
1 māḍha

30. Forty pathuriās left and received : 5 māḍha
2 cart-loads of paddy

* *of the eighth anka*, Ms. 2

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31. Vīra Sānta (Sāmanta) sent 24 cart-loads of paddy from Paraṅgabiśe
for food : — 2 gauṇi
7 paṇa kauri

32. For bringing the stones for the construction of the pīṭha :
To the jāli-worker Vidyādhara : — 40 gauṇi paddy
2 bharaṇa paddy

33. Victualling charges of the śilpin :
To the Chief Supervisor : — 220 māḍha
1 bharaṇa
13 gauṇi rice
15 gauṇi muṅg
4 māḍha

LEAF VII

1. To Ānanda Paṭṭanāyaka : — 7 gauṇi
To Bhramarabara : — 1 māḍha
To Paṭṭanāyaka : — 2 māḍha
To a guard (jagiā) : — 7 gauṇi rice
To the stone-tallyman : — 30 gauṇi rice

2. To Sundara Mahāpātra of Chaitana* and 24 pathuriās who made the stairs towards the East : — 15 māḍha gold
3 bharaṇa
27 gauṇi rice

3. To fill up the foundations 40 cart-loads of gravel from Khurdā, sent by Kṛpāsindhu Paṭṭanāyaka on the order of the Balaśrī : — 13 māḍha

4. To soak the biri** four big clay-pots were made, and forty large clay-pipes by Dama Muduli of Ḍihasāhi : — 1 bharaṇa
15 gauṇi muṅg
1 small coin elephant-marked

5. Five-cart-loads of Kendu-fruit*** from Airi Forest (for making karāḷa) : — 1 bharaṇa
4 gauṇi

Fodder for the bullocks : — 2 bharaṇa
14 gauṇi

6. For 400 iron cramps (bāgiā) supplied by Kāśī Ojhā : — 30 māḍha

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* Near Koṇārka

** Phaseolus Radiatur

*** Dyospiros glutinosa (a kind of ebony-tree)

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7. For work on the ramp by the side of the stairs (ghosarāpāhāca) on the North side, labour charges : 1 bharaṇa 17 gauṇi

8. For thirty ropes 100 hasta long for the kaḷacaka=(kind of crane) : 30 gauṇi (paid)

9. For 4 kaḷa-śagaḍi (plank with wheels) made by Govinda Baḍhei (carpenter) : 30 gauṇi paddy

10. Victualling charges for the śilpin : 1304 māḍha

11. For preparing 1 caka (15000) bricks : 14 māḍha 1 bharaṇa 14 gauṇi

12. For making 2 grinding-wheels of iron to be driven by bullocks : 30 māḍha

13. Labour charges for carrying the bricks : 7 bharaṇa 14 gauṇi

Labour charges for mixing the brick-powder and murai (?) with gravel (baṭā) : 27 gauṇi

14. On the 17th day of Kumbha in the eighth aṅka of the Mahāśrama's reign the wall of the pīṭha was finished and the pillars for the hall were brought up, labour charges : 1 bharaṇa 34 Gaṅga (coins)

15. These four pillars of polished muguni measured each 34 hasta in length. For lifting these pillars wooden posts with cross-bars and pulleys (kaḷa-gayaḷa) were set up. Labour charges : 4 bharaṇa paddy
To the foreman of temporary structures : 14 gauṇi

16. From the forest of Golara :
1100 tiṇiā logs, 230 bandhana planks,
200 paṇasa*, 300 mango beams.
For sawing the wood persons were employed and paid : 130 māḍha
To Jamei Nāraṇa Khuṇṭiā Biśoi for transport charges : 7 bharaṇa paddy
To Daḷabeherā of Raikaṭā (Lankapaḍā,** Ms. 2) for the mango timber : 300 māḍha
For making a śagaḍi with tiṇiā planks of 4 hasta, each with 2 wheels the carpenter Dāma received : 10 māḍha 1 bharaṇa paddy

17. For setting up the posts of the kaḷagayaḷa, labour charges : 24 gauṇi paddy

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* paṇasa=bread-fruit (Artocarpus integrifolia)

** See Leaf No. 1

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18. To bring the 34 hasta long muguni pillars up with the kaḷa-śagaḍi and to lay them beside their positions : 14 gauṇi

19. The stone pillars were tied by three ropes passed over the kaḷagayaḷa. Reward to the workmen engaged to raise the pillars : 2 māḍha 30 gauṇi

20. For erecting two poles with 3 pulleys on the opposite side (of the mukhaśālā), teams of 40 people pulled the ropes of 77 hasta (?) labour-charges : 24 gauṇi

21. Inside the pīṭha there were four holes 10 hasta deep (for the pillars). To fill these holes, labour charges : 13 gauṇi paddy

22. On the 24th day of Kumbha, when the four muguni stone pillars had been set up in their places, baḷi was done to the pillars with 4 coconuts.* The śilpin were given : 7 pairs cloths

23. The Head of the labourers (swāṅsyā Nāyaka) : 1 pair silk cloths
For setting up the kaḷa (gayaḷa) to Aṅgāi Nāyaka : 1 māḍha

24. To the workers who lifted the stone (pillars) with the kaḷa-gayaḷa scaffolding, labour charges for four days, at the rate of 4 gauṇi per day : 3 bharaṇa

25. On the fourth day of Mīna, after the mukhaśālā plinth had been finished and the 4 pillars set up, the cavities were filled with lime-stone. 25 women workers laboured two days for mixing and pounding it : 1 bharaṇa

LEAF VIII

1. For fitting the four Regaḍā muguni (coarse grain muguni) pillars in the mukhaśālā, to 14 people with Gaṅgā Mahā-pātra, as per contract : 30 māḍha

2. Cow-fodder : 3 bharaṇa unhusked and pounded paddy

3. To the pathuriās of Khiching (for making the pillars) : 40 Gaṅga māḍha

4. For filling up the pīṭha, to Madhu Mahāraṇā, Nidhi Mahā-raṇā, Gadādhara Mahāraṇā and other 12 people, all together : 32 māḍha

5. For making a ramp-like sloping scaffolding from the com-pound wall to the wall of the mukhaśālā, the workmen received : 9 bharaṇa 14 gauṇi

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* See plan App. No. 2

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6. To the wheel-sculptor Gaṅgā Mahāraṇā : 9 māḍha
7. To Vidyādhara Mahāraṇā for fretwork (jāli) : 2 māḍha
8. For making images of 4 hasta of Ravi-Nārāyaṇa (seated) and Mitra (standing) for the sākara-paṭā (above the portals) Gaṅgā Mahāpātra and Gadādhara Mahāpātra received a contract of 90 māḍha, advance : 32 māḍha
9. On the 4th day of Kakaḍā in the 9th aṅka*, 700 stones arrived on cāpas. The stone carriers received : 30 gauṇi
10. For bringing Kerāṇḍimāḷa stones along the Ṛṣikulyā river, the boatmen received : 170 māḍha
11. For consolidating the scaffolding with 20 wooden props Govinda Baḍhei (carpenter) received : 10 gauṇi
12. To make fretwork on the padmapīṭha of the pahaṇḍa Vīra, Vidyādhara and Yogi had a contract of 30 māḍha, they received : 4 māḍha
    on Dvādaśī again : 12 māḍha
13. For setting images on four sides of the basement : 12 māḍha
    To Gaṅgā Mahāpātra for an image of the Mahādevī with her companions : 9 māḍha
    For a view of the forest : 3 māḍha
    For 30 Virāḷa figures : 12 māḍha
14. To Gadei Mahāpātra for nude Bandha (Mithuna) images : 40 māḍha
15. On the 7th day of Siṁha, when the work on the basement was completed, 24 pathuriās received : 102 māḍha
16. For bheji-māṭi (refractory clay from Mayūrbhanj for iron-casting) : 12 māḍha
17. After having completed the crowning of the pīṭha (pīṭha-muhāṇṭi), Nārāyaṇa Mahāpātra and Yogī Mahāpātra with 104 people received : 30 māḍha 7 bharaṇa
18. For casting iron girders in the foundry, bellows had been set up on stone-posts. For oiling the bellows four women workers received : 3 gauṇi
19. After completing the pillars of the mukhaśālā under the direction of Gaṅgā Mahāpātra, in clearance of accounts : 20 māḍha

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* *eighth aṅka*, Ms. 2

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20. The Sūtradhara went to the Sunyā ceremony* in the big temple of Puruṣottama and gave charge of all work on the mukhaśālā wall and other parts to Gadādhara Mahāpātra. The hātiāla of the Puruṣottama temple, Madhu Gaḍiā, received for the return journey : 1 māḍha

21. For setting stones in the north, east and south sides of the mukhaśālā wall, 43 carriers and 12 pathuriās received : 30 māḍha

22. For a roll of thin ropes of coconut fibre : 17 māḍha

23. When the Mahāśrama had gone to war in Gauḍa-deśa (Bengal) he left the direction of the temple construction in charge of Suāsamalla Baḍajenā,** his brother-in-law, who came to see the works on the 8th aṅka*** Makara (Saṅkrānti.) Expenditure for his stay of seven days : 13 māḍha

24. Wages (vartana) of the hātiāḷas : 70 gauṇi

25. On Kumbha Saṅkrānti the pīṭhas of the Niśā temples were completed on all four sides. For this 17 pathuriās with Nārāyaṇa Mahāpātra received : 103 māḍha

26. In 203 stones, which were there, 9 were less (missing).

27. For setting up 20 khila pathara in the pahaṇḍa to Nidhi pathuriā : 3 gauṇi

28. Wages for the śilpin of the Rupāsa camp : 30 māḍha

29. To Bāsu Ojhā for supplying chisels : 17 māḍha

30. To the stone tallyman : 13 māḍha

31. To set māṅkaḍā stones (laterite) on the floor of the mukhaśālā 35 women workers received for 12 days : 4 bharaṇa 27 gauṇi

LEAF IX

1. For hollowing out six big palm-trunks to the sawyer (karatiyā) Kuḷiā and 12 labourers : 74 gauṇi paddy

2. For setting up the tāḷateṇḍiā**** on four posts : 14 gauṇi

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* The 12th day of Bhādra śukla pakṣa, called Sunyā, is the beginning of the New Year in Orissa even to-day. It is celebrated in commemoration of Indra's Banner-festival, the Dhvaja-mahotsava in ancient India.

** Suāsamalla or Sahasramalla Paramarddideva was the husband of Narasiṁha's sister Candrikā, the builder of the Anantavāsudeva temple at Bhuvaneśvara.

*** *9th aṅka* (Ms. 2)

**** hollowed out palm-trunks

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3. For filling them with powdered limestone from the compound outside, to 30 women, and for pulling the tāḷateṇḍiā from inside, to 7 people, to all together : 1 bharaṇa

4. For stamping down the limestone 3 small elephants were brought inside (the mukhaśālā). Chaḍa Siṁha besides his regular wages, received : 10 gauṇi

5. For mixing cuna rasa karāḷa* : 10 gauṇi

6. To 37 women workers for levelling (the floor) with korā-muṇḍiā and dhurmusa** in three days : 1 bharaṇa 37 gauṇi

7. For setting flags of black muguni stone on the lime-stone base, to Bańsī Mahāraṇā with 47 workmen : 77 māḍha
To Bańsī : 2 māḍha

8. For making the outer stone-steps 27 workmen received : 2 bharaṇa 14 gauṇi 1 māḍha

9. For making the nandāvarta (round steps) of the inner door (between garbha and mukhaśālā) to nine stone-workers : 2 bharaṇa 22 gauṇi

10. For determining the position of the garbha-dvāra (entrance to the sanctum) by means of the śaṅku, the Sūtradhara received : 1 māḍha

11. For making a scaffolding reaching upto the doorway, propped up against the back-row of pillars : 14 gauṇi

12. According to the measurements of the dvārabandha 10 whole and 70 dressed muguni stones were laid out on the sand on the southern side. To the workmen : 34 gauṇi

13. On the 14th day of Mīna the Sūtradhara and Gadādhara Mahāpātra arranged these stones according to the divisions of the dvāra-bandha with the help of the thread. To the stone-masons : 1 bharaṇa 11 gauṇi

14. For setting one hundred bamboo pegs, Madhu Mahāraṇā and eight workmen received : 8 gauṇi

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* mixture of lime-water with brick-powder, kendu-juice and guḍh.

** big wooden pestles

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These pegs were driven into the ground to fix the stones from all four sides :

To Madhu Mahāraṇā : 11 gauṇi

15. To Sūtradhara and Aṅgāi Nāyaka for tracing the design of the door-jambs : 2 small Gaṅga māḍha

To Rādhī (woman worker) for making 100 bamboo-pegs : 7 gauṇi

16. Viśvanātha Mahāpātra, Rāma Mahāpātra, Dharma Sāmantarāya Mahāpātra and Choṭa Baḷi Mahāpātra, these four leaders were given a contract of 212 māḍha to accomplish this work (the dvāra-bandha) within six months. They received down payment : 120 māḍha

17. To help this group three workmen were appointed on a contract of six months and received : 24 gauṇi
2 bharaṇa (Ms. 2)

18. For serving pān (betelnut) to the kārigars who were doing the fine chisel-work (sūci-kāma), one man was appointed and received : 24 gauṇi

19. To the 230 śilpin who had constructed the wall of the temple (garbha) according to design : 910 māḍha

20. To 312 pāiṭāḷa in the Rupāsa camp : 824 māḍha
To 108 pāiṭāḷa in the Duāi camp : 324 māḍha
To the stone-masons : 7 bharaṇa
To seven overseers : 11 māḍha
To the Sūtradhara 3 months' salary : 7 māḍha
To 30 stone-workers who worked on the jagamohana : 80 māḍha

21. On the third day of Meṣa (Vaiśākha) of the 9th aṅka the scaffolding for the front was finished.
To 70 workers who made the scaffolding for the wall : 3 bharaṇa
24 gauṇi

22. Fodder for the bullocks : 11 bharaṇa
30 gauṇi
To the bullock-carters : 2 bharaṇa
24 gauṇi

23. To the Superintendent Bhramarabara of Kilā Bayāḷisbāṭi : 2 māḍha
To all overseers : 47 māḍha

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24. The Father-in-law of Mahārājā Narasiṁha Deva* sent ten śilpis from Madur(a)i as a present. Sindhu-Peṇḍulu Goḍḍur Śarmā, Pitāmbara Peṇḍulu and others. For them a temporary house was made on the eastern side. Labour charges : 1 bharaṇa 30 gauṇi

25. For providing the Madurai kārigars with fine rice (peḍḍu) : 28 gauṇi
Honorarium (sammāni) : 21 māḍha per month

LEAF X

1. On the 14th day of Meṣa, on Wednesday, the following presents arrived from the Father-in-Law of the Mahāśrama :

10 pair silken cloths

10 pair silken caddars (shawls)

1 ivory seat with gold inlay for the Mahāśrama

7 uncut rubies (for the padma)

1 silver-box for pān (Ms. 2)

10 coconuts covered with sindūra

2 silken saris for the Mahādevī (Chief Queen)

1 pair of silken cloths for the Sūtradhara

7 pair golden kuṇḍalas (ear-pendants) for the sthapatis

7 pair golden khaḍus (wristlets)

These presents were brought by Sāmanta Purodhā Virūpākṣa Śarmā. A special camp was arranged for him and servants were appointed for him for four days : 30 gauṇi

Victualling charges with fine rice for 12 people : 14 gauṇi

To the cook : 2 māḍha

2. To Naḍiā Bābājī, for supplying coconuts : 1 sañcā**

3. The Officer-in-charge sent the presents for the Mahādevī through the Purodhā (Virūpākṣa Śarmā) to the Puruṣottama kṣetra. For this one bullock-cart was sent : 1 bharaṇa

The armed guards' wages : 22 gauṇi

4. For a letter of command to the special messenger : 14 gauṇi

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* The Pāṇḍya Rājā.

** sañcā=contains all ingredients required for one meal, which will vary according to the status of the giver and the receiver, and according to the number of days and people,

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5. On the 10th day of Vṛṣa (Jyeṣṭha) for the scaffolding on the southern side of the temple, labour charges : 1 bharaṇa 12 gauṇi

6. On the 10th day of Vṛṣa the Sūtradhara refused to accept the completed work of the śilpis from Madurai, who therefore felt offended and abstained from food. Upon this a letter was sent to the Mahāśrama by a messenger on horseback : 1 bharaṇa 24 gauṇi

7. Sūtradhara's salary : 27 māḍha

8. To the workmen carrying stones, wages for three months : 3 bharaṇa 24 gauṇi

9. A letter came from the Mahāśrama, informing the Sūtradhara, that the Madurai śilpis should be assigned the task of making creeper-and other decorations :

10. The tell-tale Bābājī pathuriā was dismissed. Wages for the guard who went to collect the fine : 7 gauṇi

11. A separate quarter for the Madurai śilpīs was made on the western side, expenses : 1 bharaṇa 10 gauṇi

12. To 207 workers who had been engaged for building the walls of the temple under the leadership of Madhu Mahāraṇā, balance of wages : 12 māḍha

13. To the 10 Madurai śilpis for making ornamental creeper-work on the pīṭha, on the 7th day of Mithuna : 30 māḍha

14. At the height of the niches (behind the niśā-temples) strong wooden platforms were erected on palmwood posts and secured in the wall. To 12 workers who lifted the large Sūrya images of 3 kāṭhi, made of blue muguni stone, by kaḷa on to the platforms : 7 māḍha 24 gauṇi

15. The work for the image on the western side had been entrusted to Sūtradhara Sadāśiva Sāntarā (Sāmantarāya) and three workers. He received : 10 māḍha 40 gauṇi

16. The image on the northern side had been entrusted to Gadādhara Mahāpātra, Head of his community (Kūḷapāṭa Sānta) with three workmen ; 10 māḍha 40 gauṇi

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17. The work on the southern side (to the same one, Ms. 2)* — 10 māḍha 40 gauṇi

18. For flat chisels (guṇti) and sharp pointed chisels (rasuḷi) for carving the muguni stone : — 3 māḍha

19. On the pīṭha there is a 70 hasta high scaffolding. For raising further the eastern and northern side of this scaffolding of 7 bhāriā** by 130 poles, work went on for 7 days : — 13 māḍha 14 gauṇi

20. Wages to the hātiāḷa Chaḍa Siṁha : — 4 bharaṇa 17 gauṇi

For feeding the elephants : — 3 bharaṇa 2 gauṇi

21. Ladder-scaffoldings were made for the work inside the jaga-mohana and the temple. Labour charges of 40 people : — 40 gauṇi

22. For ten cart-loads of charcoal for the smelting furnace for casting the iron girders, to Rādhu Paṭṭanāika : — 3 māḍha

LEAF XI

1. For filling the earthen channel-moulds with coconut fibre, labour charges : — 11 gauṇi

For sinking the earthen-ware channel-moulds 2 hasta deep into the sand, labour charges for 7 people : — 30 gauṇi

For filling the mouths of the earthen moulds with wax to a depth of 1 hasta, lumps of wax were purchased from Dāma Sāhu : — 1 māḍha 30 gauṇi

2. Fitting copper-pipes into the channel-moulds above the wax, for discharging the wax, to Vīra Ojhā : — 2 māḍha 10 gauṇi

3. There are 12 skin-bellows, four in a row, for which large holes were dug. For digging these holes : — 2 gauṇi

4. For filling charcoal into the furnace : — 7 gauṇi

5. For making small stone pillars standing in a row on each side 7 people laboured and received : — 1 māḍha 14 gauṇi

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* Later, on Leaf XIII it appears that this work was entrusted to Nārāyaṇa Mahāpātra.

** May be a weight measure like tinbhārīa and mean : load that 7 men can carry. Thus it might indicate the weight that the scaffolding could support.

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6. The copper crucibles were placed on the stone-pillars and plastered inside with a mixture of earth, cowdung and chaff, Labour charges of 12 women workers :	37 gauṇi
Putting 3 vessels for containing the lead on the stone-pillars, Labour charges :	24 gauṇi
Above the crucibles were the funnels through which the lead would be poured in, connected by pipes to the bottom of the containers (for the admixture of lead) Vīra Ojhā received :	2 small māḍha
7. On the second day of Kakaḍā (Śrāvaṇa) the casting of 7 aṅguḷi iron girders began. For this a bhāṭi (iron-casting) pūjā was performed. Dakṣinā to the Purohita :	20 gauṇi
To the men who worked the bellows (bhātiā) :	1 pair cloths each
To Vīra Ojhā :	1 pair cloths
To Kāṅga (Kāśī) Ojhā of Jaḷeśvara Daṇḍapāṭa :	1 pair cloths
To Sujā Mohammed of Bhadreśvarī Maṇḍala :	1 cloth 1 dupaṭṭa, two strips of phutta cloth for a jāmā
8. For fixing 7 pair of wooden posts in front of the smelting crucible (for a second crucible) and for feeding charcoal into the two-stepped furnace. Labour charges :	11 gauṇi
For filling the round crucible on wooden posts, pipes were welded between the two, for which Kāśī Ojhā received :	17 gauṇi
For fitting four straight copper-pipes of 2 hasta to the front of this crucible, for copper and the copper-smith :	3 maḍha
9. For burying the earthen channel-moulds directly below the copper-pipes, one man received for two days :	8 gauṇi
10. Two men working the bellows (bhātiās) :	10 gauṇi
11. For casting eighteen iron girders, 7 aṅguḷi in diameter, to Bāsu Ojhā :	2 māḍha 7 gauṇi
12. To the Accounts-Officer :	47 māḍha
13. In the rainy season (caturmāsyā), when the work was stopped, 40 men were retained for carrying stones, besides 17 boatmen and others. The retaining fees for all the śilpis was :	214 māḍha
340 labourers (pāiṭāḷas) and stone-masons (swāṅsyās) received their wages :	214 māḍha

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LEAF XII

1. Fourteen iron-workers (kāraḍis and ojhās) were given leave and paid off :	74 māḍha
2. To the śilpis, payment in paddy :	3 bharaṇa
3. After collecting the taxes from the traders of Rupāsa and Pāṭeli, they were deposited in the Treasury : 7 kāhāṇa 7 paṇa kauri 27 Kala Bādshāh coins (taṅkā) 237 Bādshāh small coins (sikkā) The tax-collector received on contract :	2 māḍha 23 bharaṇa
4. One hātiāḷa went to Puruṣottama :	7 gauṇi
5. To the storekeeper, the tax-recorder and the Sūtradhara : Two nephews of the Sūtradhara :	3 māḍha 22 gauṇi
6. The boatman Rāmeśvara received for 9 boats :	7 bharaṇa 12 gauṇi
7. To the sevakas of Gaṅgeśvarī Devī : To the Purohitas of Vedapura for religious functions (karmāṅga dakṣinā)	1 bharaṇa 3 māḍha 17 gauṇi
8. The Rājasiṁha Deva of Dheṅkāḷa (Dheṅkanāl) sent two pathuriās to the Rājā, but since work was stopped on account of the rainy season, they were sent back and given for their journey :	3 māḍha
9. In the Viśvanātha Hills of Jagadaḷapura seven men under Dulī pathuriā had quarried 70 large erratic boulders (jiyasa) and had loaded them on cāpas on the Dayā river. The boatmen carried them to the Mahānadī and received :*	2 māḍha 10 gauṇi
10. The boatmen of the Mahānadī carried the stones through the Sola river to the gaṇḍa (canal leading to Koṇārka) and received :	3 māḍha 27 bhārana 27 gauṇi
11. A report about the works accomplished was sent to the Mahāśrama at Biḍānāsī, the man who carried the report received :	7 small māḍha

* Doubtful itinerary unless those rivers were connected to the Mahānadī by navigable canals.

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12. On orders of the Mahāśrama Balaśrī Narāyaṇa Baḍajenā* came on elephant-back. For the elephants and the hātiāḷa : (Provisions for the Balaśrī ?) : — 12 gauṇi, 7 gauṇi fine rice

13. Mukunda Mahāpātra and Rādhu pathuriā went to Narasiṁhapura by boat for quarrying stones. For their journey : — 40 gauṇi rice, 10 gauṇi muṅg, 2 kāhāṇa 12 gaṇḍā kauri

To send stones from Narasiṁhapura these two received advance payment : — 40 māḍha

14. On the 10th of Kakaḍā there was a cyclone, on account of which the scaffolding on the western side was damaged. Eight people from the Duāi camp were summoned to retighten it. They received : — 27 gauṇi

15. A cāpa of 18 hasta for carrying large stones coming from the Bāṇeśvara Hills had by the same cyclone been sunk into the canal. One man dived and tied ropes around it. Three elephants pulled the ropes : — 24 gauṇi

Expenditure for ropes : — 2 kāhāṇa kauri

After ten days, when the stones were brought up to the bank, the man who had dived, Jaguni pathuriā received : — 1 māḍha

16. On the order of the Rājā the Sūtradhara went to Biḍānāsī on elephant-back. For the elephant on return : — 12 gauṇi

To the hātiāḷa : — 2 gauṇi

To the Sūtradhara : — 2 māḍha

17. On the Sunyā day of the 11th aṅka (Bhādra śukla dvādaśī) Viśi Mahāraṇā (Mahāpātra) sent a Rāja image (as a present to the Mahārāja) and received : — 1 gold ring

18. Six men were sent out with notices (to the śilpis) that they should return to work by the 5th day of Kanyā śukla pakṣa.

One man went to Biribāṭi (Cuttack District) : — 21 gauṇi

One to Chaitanā (Purī District near Koṇārka) — 10 gauṇi

One to Remuṇā-pāṭa (Bāleśvara District) : — 3 māḍha

Another went to Nuāgaḍa (Purī District) : — 23 gauṇi

given by the Nuāgaḍa Rājā

One went to Puruṣottama and one to Ekāmra (Bhuvaneśvara) — 2 māḍha

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* Minister for military affairs.

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19. The Madurai śilpis went to Puruṣottama to see the celebrations for the new aṅka of the reign (Sunyā). The palanquin-bearers received : 2 bharaṇa 10 gauṇi

20. On the sixth day of Kanyā śukla (kṛṣṇa) pakṣa 77 pathuriās arrived. For their victualling : 1 bharaṇa 10 gauṇi

On the 11th day of kṛṣṇa pakṣa 22 pathuriās arrived from Biribāṭi. For their victualling : 36 gauṇi

On the 2nd day of śukla pakṣa 42 pathuriās came from Remuṇā, for their victualling : 1 bharaṇa

On the same day 27 persons came from Nuāgaḍa, they received : 32 gauṇi

Those who returned from Mayūrbhañj : 12 gauṇi

Those from Tāpaṅga (Purī District) : 12 gauṇi

On the 5th day of Kanyā śukla pakṣa 27 pathuriās arrived from Puruṣottama and Ekāmra, they received : 2 bharaṇa 7 gauṇi

21. In the Rupāsa camp 237 workmen (pāiṭāḷas) were lodged. They received : 4 bharaṇa 22 gauṇi

LEAF XIII

1. For lifting the Sūrya image that lay on the scaffolding on the western side 17 persons were paid for their labour : 27 gauṇi

2. While lifting, the workmen Dāmajenā fell down on his head and gave up Hari (his ghost). His son Raghuā was given a life sustaining sum (ghaṭapoṣaka) of 30 māḍha and 10 guṇṭha land in Bālinuāgān.*

3. To the Daḷabeherā of Tāpaṅga : 5 māḍha

4. For making 10 Dikpāla images in stones from Kanyāgaḍa, to Nārāyaṇa Mahāpātra : 10 māḍha

5. Sūtradhara received : 30 māḍha (Ms. 2)

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* After this incident most probably this particular work was temporarily suspended. It appears again later under No. 11.

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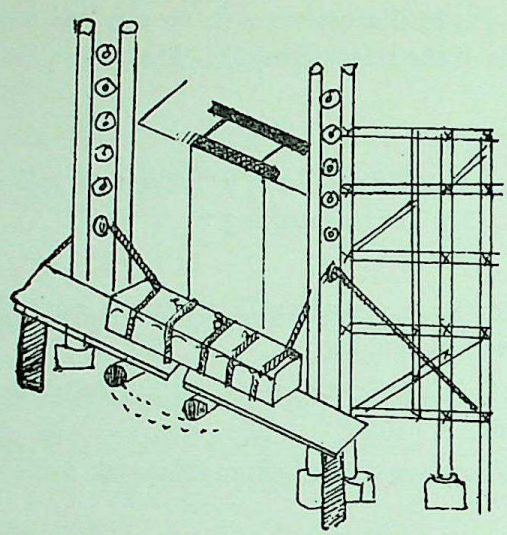

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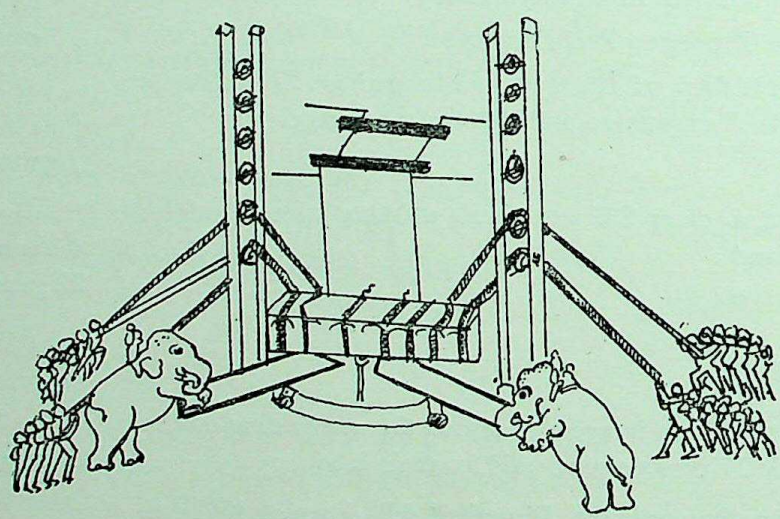

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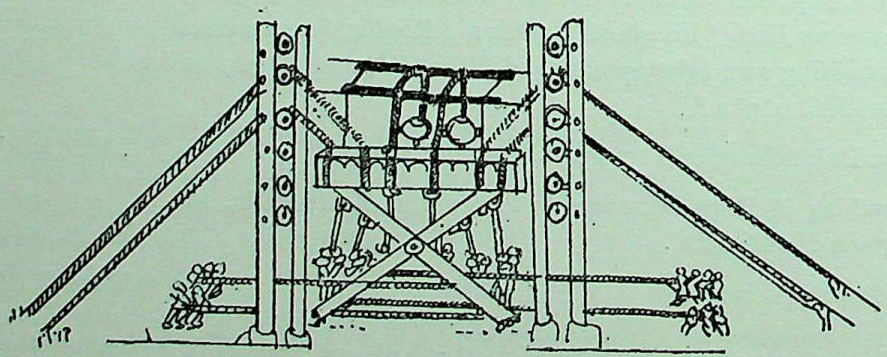

3

Leaf XIII–XIV, Lifting the Navagraha stone by kaḷagayaḷa and uṭhāḷiphāsa

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6. Nārāyaṇa Mahāpātra, Mukunda Mahāpātra and Dharma Mahāpātra with 14 other sculptors were given for two Navagraha stones, a contract of: 230 māḍha

7. For work on the wall upto the bandhanā of the jagamohana, 203 śilpīs received : 25 māḍha

8. For making the stone-berm (pahaṇḍa) on both sides (north and south ?) forty pathuriās received : 120 māḍha

9. On the fifth day of Tulā of the victorious, prosperous reign of this aṅka,* all wall-work was finished, except the niches (upper parts of niśā-temples). 214 posts of the scaffolding were left and the rest removed.
Labour charges to 4 pāiṭāḷas : 1 bharaṇa
For a religious food-offering on opening and removing the scaffolding (mauḷā-pūjā) : 24 gauṇi cuḍā

10. 240 Regaḍākuṇḍā** stones arrived on the canal from Narasiṁhapura Fort. Carrying charges : 1 bharaṇa 70 gauṇi

11. On the 24th day of Tulā the images were set up in the niches. Nārāyaṇa Mahāpātra received salary (see Leaf X, 17 note) (Pl. 40–45) : 53 māḍha
Sadāśiva Sāntarā Mahāpātra Sūtradhara received : 50 māḍha
Gadādhara Mahāpātra : 50 māḍha
Sūtradhara for setting up the images*** : 1 māḍha

12. Dharma Mahāpātra, Nidhi Mahāpātra and Lakhaṇa Mahāpātra with 12 pāiṭāḷas took the Navagraha stone and placed it near the pillars : 32 gauṇi

13. The carpenter Nidhi Mahāpātra supplied two thick planks of bandhana wood 18 hasta long. Labour charges : 4 gauṇi

14. Carrying and placing four wooden rollers of 3 hasta length, labour charges for 3 people : 2 gauṇi

15. These were placed on the eastern nandāvarta. The two planks were placed upon them on the pīṭha, leaving the necessary gap (khāndi) in the middle. On these the (Navagraha) stone was placed. Labour charges : 23 gauṇi

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* *11 aṅka* (Ms. 2)

** Spotted stone mainly used in the construction of the temple.

*** It is a rule among the śilpīs, that only the Sūtradhara has the right to set up the images of the Pārśva Devatās.

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16. Dāma Mahāpātra carpenter supplied :
4 āśā of 2 hasta length
4 āśā of 3 hasta ,,
4 āśā of 5 hasta ,,
4 āśā of 7 hasta ,,
4 āśā of 9 hasta ,,

LEAF XIV

4 āśā of 12 hasta, altogether 24 āśā made of palm-wood. Making charges : 12 gauṇi

1. Bāsu Ojhā supplied one pair of iron uṭhāḷi-fāsa of 10 hasta, shaped like a vyāsāsana (reading stand) : 3 māḍha

Kāśi Ojhā joined eight small wheels to the feet of these fāsa and received : 1 māḍha

2. Sundar Mahāpātra Pathuriā supplied four khilapathara for being set up on both sides of the portal : 6 gauṇi

Four wooden posts with six iron-pulleys (sagaḍi) between them were set up in these khila-patharas and six ropes were tied around the (Navagraha) stone. Labour charges for 3 people : 7 gauṇi

3. On the 18th day of Tūlā of the 12th aṅka* Balaśrī and Gopīnātha Deva, the step brother of the Mahāśrama, came from Puruṣottama to witness the setting up of the (Navagraha) stone. The hātiāḷas wages : (Pl. 62-64 and drawings on p. 72) 17 gauṇi

4. On the 19th day of Tulā the hātiāḷas brought two elephants and had them press down the ends of the planks with their forelegs, shouting "Haribol !" :
The hātiāḷas received : 2 gauṇi

Ropes 12 hasta long were tied on the legs of the uṭhāḷifāsa : 2 gauṇi
Twelve men pulled the ropes from right to left and twelve men from left to right, wages : 7 gauṇi

Fourteen men lifted the stone with āśās from below : 1 gauṇi each

The ropes passing over the pulleys were pulled by 12 men : 7 gauṇi
From inside (the mukhaśālā) two ropes with two stones (olhāḷa) of two hasta diameter were controlled by two people : 2 gauṇi

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* *14th aṅka, Ms. 2*

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Supply of pān : 2 māṇa

Two watches of the day were left, when the Navagraha stone was set up on the iron-girders above the portal* :

5. A quantity of sharbat was offered for the Navagraha :

khaṇḍa-sugar	=4 nauti (12 seers)
chenā (casein)	=2 big pots (hāṇḍi)
karpura (camphor)	=2 tolās (gaṇṭhi)
mirca (black pepper)	=3 tolās (gaṇṭhi)

To the man (cīrāḷiā) who had shouted "Haribol"** : 1 gauṇi

6. Balaśrī presented to Nidhi Mahāpātra (who had distinguished himself in this work, (Ms. 2) through the Sūtradhara an award of: 1 Gaṅga māḍha

Gopīnātha Sāmanta Buḍhāleṅkā presented through the Sūtradhara a piṭhākhiā of 1 Gaṅga māḍha (for honouring all the workers) and 1 māḍha as a sammānibheṭa to the Sūtradhara (to honour him).

LEAF XIV a (Supplemetary Leaf of Ms. I subsequently found.)

After receiving clearance for the construction of 5 kinds of boats :

1. Cāpa, ḍhola, ḍiṅgā, bhoṭa, kośaḷi, 4 went to Nāsī (Bāṇeśvara), 3 to Nīlagiri, 12 to Dayā river, 14 to Ṛṣikulyā river, 2 to the Mahānadī. Making charges : 300 māḍha

Wood had been provided from Jaṅkiā.

2. A contract was given to Gaṅgā Mahāpātra, Nārāyaṇa Mahāpātra, Madhu Mahāpātra, for the construction of the mukhaśālā pīḍhas : 500 māḍha

3. For the Navagraha stones of the southern and northern portal to Gadādhara Mahāpātra (Pl. 62-64) 17 māḍha

4. For a bāṇkapaṭi of 6 hasta to the team of Gadādhara Mahāpātra : 30 māḍha

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* When the P. W. D. men wanted to transport the Navagraha stones to Calcutta, but did not succed in moving it, they appealed to the Śilpī community for assistance. But Śiva Mahānti, their leader, stopped them from cooperating, fearing that the stone would be carried away to England. It is likely that the śilpis would be able even to-day to handle and move such enormous stones with the ancient methods used by their forefathers.

** Cirāḷiā is the man directing and controlling the rhythm of such operations with a flag in hand shouting "Haribol".

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5. For a ten-armed image of Durgā to Viśvanātha Mahāpātra : (probably the image of Mahiṣamardinī for the vimāna-śikhara) : (Pl. 32) — 5 māḍha
6. For fetching a consignment of stones from Nāsī (Bāṇeśvara) to one Pāika : — 70 māḍha
7. Carving work on the meḷāṇa (bandha) of the mukhaśālā to Yogi, Nidhi and Gaṅgā Mahāpātra : (Pl. 57) — 30 māḍha
8. For Beki-Bhairavas and Hāta-Aḷasākanyās to Narasiṁha Mahāpātra and others : (Pl. 49) — 11 māḍha
9. For carving the āmalakīs ten pathuriās received : — 12 māḍha
10. For making ten Dikpālas and Dikpāla-patnīs in muguni stone Gaṅgā Mahāpātra and thirty pathuriās received : (Pl. 33) — 130 māḍha
11. During the visit of a Rājā, the Pāika received : — 3 gauṇi
12. For carrying the rough stones to the mukhaśālā the Pāiṭāḷas received : — 17 gauṇi
13. For the construction of the mukhaśālā anurathas to Lakhaṇa Mahāpātra with a team of 24 people : — 72 māḍha
14. To the stone-tallymen : — 12 māḍha
15. To carve drains out of 302 stones Madhu Mahāraṇā, Yogi Mahāraṇā and 22 persons received : — 32 māḍha
16. Salary of the supervisor (parichā) : — 11 māḍha

LEAF XV

1. Salaries for 108 śilpīs of the Rūpāsa camp : — 230 māḍha
   Salaries for 214 śilpīs of the Deuḷi camp : — 428 māḍha
2. For making vertical scaffoldings 4 hasta broad on the pīṭha along the south wall of the garbha and the mukhaśālā, 70 pāiṭāḷas had worked 28 days on the garbha and received : — 4 bharaṇa 24 gauṇi
   23 people had worked for ten days on the mukhaśālā and received : — 1 bharaṇa 34 gauṇi
   Setting up and tying (the scaffolding of the garbha) : — 30 gauṇi
   Setting 72 posts and tying the scaffolding of the mukhaśālā : — 47 gauṇi
3. Carrying the stones for the first pīḍha (roof) : — 23 māḍha 14 gauṇi

   For carrying stones to the main temple to Dāmajenā Pāiṭāḷa Nāyaka : — 23 māḍha 14 gauṇi

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4. Mukunda and other five pathuriās were given a very large Regaḍākuṇḍā stone for the Garbha-siṁha and a contract for this work of 30 māḍha.* Advance payment : (Pl. 46) — 10 māḍha

5. On the fifth day of Dhanu of the 12th aṅka, Nidhirāma Mahāpātra with 130 pāiṭālas began to join (lay) the first pīḍha of the mukhaśālā. For this, wooden scaffoldings of 7 hasta (breadth) were set against the pillars inside the hall. Ten people worked 4 days and received : — 1 bharaṇa

6. Salary of eleven overseers : — 47 māḍha

To 6 water-carriers who supplied water to the śilpīs, wages for 6 months : — 1 bharaṇa

To the Chief of hātiāḷas (Ms. 2) — 24 qauṇi

Fodder for 4 horses and victuals for the grooms : — 1 bharaṇa 7 gauṇi

Sūtradhara's salary : — 10 māḍha

7. On the 8th of Makara, when the six tiers of the first pīḍha were set, for carving and finishing the elephants and rājabandha on the face (muhāṇṭi) of the pīḍhas, the śilpīs, including Mukunda Mahāpātra. Aparti Mahāpātra and four Madurai śilpis received : — 40 māḍha 1 bharaṇa 24 gauṇi

8. On the 20th day of Makara. for bringing stones for the wall-portion (bharaṭi) above the first pīḍha : — 30 māḍha

9. Carving the stones for the first ceiling of the garbha upto the height of 30 hasta upon the wall (bāḍa), labour-charges : — 47 māḍha

10. From the door passage (dvārabandha-vāṭa, Ms. 2) a scaffolding of 78 hasta was raised on the pillars for carving the ceiling, labour charges for 10 people : — 2 māḍha 17 gauṇi

11. For two pīḍha-kanyās to Madhu Mahāpātra, according to contract : — 7 māḍha

For two pīḍha-kanyās to Sāma Pathuriā : (Pl. 67-72) — 7 māḍha

For two pīḍha-kanyās to Nidhi Mahāpātra : — 7 māḍhā

For two pīḍha-kanyās to Aṅgai Nāyaka : — 5 māḍha

For two Bhairava mūrtis to Gadādhara Mahāpātra : — 8 māḍha

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* Perhaps the big lion on the eastern front.

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12. From the opening of the khāndi of the first pīḍha 8 aṅgula square iron-girders projected and on these a 7 hasta scaffolding was erected by 20 people : wages — 1 bharaṇa

LEAF XVI

1. For carrying stones by sāṅgi to the main temple 22 men received : — 1 bharaṇa 10 gauṇi
2. For making pīḍha-kanyās to 8 śilpīs including Nidhirāma Mahāraṇā : — 130 māḍha
3. For carving the wall above the pīḍha with decorative work to 7 śilpīs with Mukunda Mahāraṇā : — 40 māḍha
4. On the 3rd day of Kumbha the scaffolding for setting up the Kanyā figures was finished on all four sides. Labour of 40 people : — 2 bharaṇa 27 gauṇi
5. In front of each place where sculptures had to be set up Kāśi Ojhā fixed iron girders with 4 pulleys, he received : — 20 māḍha
6. For lifting the sculptures a wooden prabhā (plat-from with back) with four rings for passing the four ropes was made by Nidhi carpenter : — 2 māḍha
7. To the Biśoi of Golara Fort, for supplying twelve ropes 100 hasta long, coated with ghṛtakumārī juice* : — 2 māḍha
8. To 28 people for carrying and arranging the stones for the second pīḍha of six tiers, labour charges : — 2 bharaṇa 13 gauṇi
9. On the 30th day of Kumbha** stones (stone-walls)*** were set up to support the weight of the pīḍha by four teams, Maṅguḷi Pathuriā received : — 1 bharaṇa
10. Bhramarabara received salary : — 2 maḍha
11. On the 6th day of Mīna, for hauling the kanyā figures onto the roof : — 14 gauṇi
    For pulling the ropes : — 7 gauṇi rice

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* ghṛtakumārī=Aloe Indica

** *of the 12 aṅka (Ms. 2)*

*** Most probably between the ground and the pīḍhas and between the pīḍhas in order or reinforce them, when hauling up the heavy sculptures. see Leaf XXII, 14

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	One image was placed on the prabhā and tied on its back with four ropes :	3 gauṇi
	Eight men with āśās pushed from below with all their strength :	13 gauṇi
12.	For purchasing red cloth* :	40 kāhāṇa kauri
13.	For setting up all the Kanyās and Bhairava images on all four sides, to 72 people :	30 māḍha 1 bharaṇa 27 gauṇi
14.	Lifting the stones for the second pīḍha along the wall :	2 bharaṇa 30 gauṇi
	For building the pīḍha, contract had been given to 24 pathuriās :	20 māḍha
15.	For carrying stones to the garbha, to 38 men :	2 bharaṇa 24 gauṇi
16.	On the 15th day of Mīna in this** aṅka for setting images on the second pīḍha 4 people received :	35 gauṇi
17.	For placing (images) on the south and the west side 30 people received :	24 gauṇi
18.	For preparing and arranging on the ground the stones for the third pīḍha, 32 pathuriās, including Yogi Mahāpātra, received for 10 days : (Pl. 65)	70 māḍha
19.	Kāśi Ojhā supplied 230 iron-cramps (bāgiās)	2 māḍha 4 gauṇi
20.	For covering the mukhaśālā with three layers of polished stones (muda-pathara) and for securing the uppermost layer with cramps, 14 kārigars worked for 12 days :	1 bharaṇa 14 gauṇi
21.	Rāma Paṭṭanāyaka had brought 6 bags of sal-tree resin from the south to Puruṣottama and from there (to Koṇārka) in three bullock-carts. Price of the jhuṇā (resin). Bullock-cart charges :	5 māḍha 24 gauṇi
22.	Mixing the pulverized resin with til-oil, labour charges to five women :	3 gauṇi

* May have been required for the ceremony of consecration of the Bhairavas, who were the guardians of the temple. See note on Ghaṇṭākarṇa Bhairava, Appendix No. 12

** *11th aṅka, Ms. 2.*

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For mixing lime (cunā), molasses (guḍ) and pulses (biri) : 20 gauṇi biri, 14 nauti (pots) til-oil, 3 big pots of molasses were supplied from the stores, For filling the joints between the stones in the ceiling, this mixture was used and then rubbed with stone-powder. Twelve women worked for 3 days. Their wages :	3 gauṇi 34 gauṇi
23 For carrying stones at the time of setting the third pīḍha above the ceiling (garbha-muda) 70 people worked 12 days :	23 māḍha
24. Dāma Mahāraṇā with 30 other people received a contract of 70 māḍha for preparing on the ground the stones for the muṇḍāḷi of the mukhaśālā, down payment :	30 māḍha 24 gauṇi
25. For preparing on the ground four Piṇḍisiṁhas (cirā-siṁhas) and 4 muṇḍāi-kanyās (crouching kanyās) to be set up on the piṇḍi, a contract of 70 māḍha was given to 10 śilpīs. Advance paid : (Pl. 75)	5 māḍha 24 gauṇi
26. Twelve pāiṭāḷas worked 3 days for carrying the aḷāśrī (āmalaka), etc. to the mukhaśālā. Wages :	24 gauṇi
27. The coping stone was set in the opening. Thirteen people, including Yogi, Nidhi, Ghana, who had been given a contract of 20 māḍha for making this padmaphuliā aḷāśrī for the mukhaśālā jagamohana in the form of a lotus bud received : (see App. No. 6)	5 mādha 24 gauṇi
LEAF XVII	
1. For setting the aḷāśrī on the mukhaśālā Gaṅgā Mahāraṇā received :	3 māḍha
2. Twelve people went to see the Ratha at Puruṣottama. For the journey of the śilpīs :	17 gauṇi rice 7 gauṇi muṅg 3 māḍha
3. For setting on the garbha 3044 koṇaka bhūmi stones prepared on the ground under the direction of Nidhi Mahāraṇā, Ghana Mahāraṇā and others, according to contract : (Pl. 2, Pl. 47)	30 māḍha
4. To the men who supplied water : To the men who supplied pān ;	24 qauṇi paddy 1 bharaṇa 14 gauṇi

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5. Since the Mahāśrama was absent, the Sunyā presents of the camp were given to the Sūtradhara, who deposited 30 māḍha in the Treasury.

6. Dāma Samartha received for ropes : 30 gauṇi

7. For making a scaffolding with sloping ramps all around the main temple 12 pāiṭāḷas worked for 12 days and received : 3 bharaṇa 10 gauṇi

8. For fine chisel-work (sūci-kāma) on the images of the Niśā-temples Gadādhara Mahāpātra, Gaṅgā Mahāpātra and others received : 17 māḍha

   To the Sūtradhara for this same work : 11 māḍha

9. For fine work on the muhāṇṭi above the wall according to contract, to Yogi Mahāraṇā, Nidhi Mahāraṇā and Gaṅgā Mahāpātra, who gave the assignment : 13 māḍha 14 gauṇi muṅg

10. The Gaḍanāyaka Vidyādhara of Sāraṅgagaḍa accompanied by his officers brought a present of 214 pairs of Maṇiābandi cloths. The bullock-carters received as farewell present : 34 gauṇi
    The Sāmanta : 2 māḍha

11. For the Astrapūjā* of the Viśvakarmā community on Āśvina śukla daśamī the Sūtradhara was handed over the following articles from the store room :

    Khanda-sugar= 2 māṇikā
    Ghee = 4 pots
    Biri =14 nauti
    Clay-pots =14

    These articles were sent from the stores to the camp. For miscellaneous expenses : 27 māḍha
    The Sūtradhara received : 3 pairs of cloths

12. Nidhi Mahāraṇā fell ill and was taken by bullack-cart to his village Caitanā Incoḍa. For the journey of the bullock-carter : 4 gauṇi

13. For finishing the work on the bandhanā on all four sides of the wall a scaffolding was erected with planks of 2 hasta (width) for seated work. Twelve pāiṭāḷas received : 3 bharaṇa 12 gauṇi

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* Pūjā to the instruments and tools, see L. II, 4.

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14. For making kanyās inside the bandhanā under the direction of Gaṅgā Mahāpātra, 24 people received (Pl. 18) : 34 māḍha

16. On the 3rd day of Meṣa* the anuratha śikharas had been completed.

On the order of the Sūtradhara Gaṅgā Mahāpātra had received a contract of : 30 māḍha
for making the Dikpāla images of 1 hasta 9 yava with his own hands (Pl. 33) :

17. The jāli-cutter yogi Mahāraṇā received : 2 bharaṇa

18. The overseers' salaries : 47 māḍha

The superintendent : 11 māḍha

19. For work on the anuratha śikharas of the mukhaśālā under the direction of Gadādhara Mahāpātra, 13 people including Nidhi Mahāraṇā and Rāma Mahāraṇā, received : (Pl. 52, 56) 27 māḍha

20. Salary to the hātiāḷa Chaḍā Siṁha : 1 bharaṇa

21. To the śilpīs of the Rupāsa camp : 303 māḍha

22. 300 date-palm leaf mats were purchased from Biśi Nāyaka of Aḷaguma : 3 māḍha
14 gauṇi

23. On the (last) Thursday of Mṛgaśira (Lakṣmī pūjā) 103 śilpis went to their villages and received in clearance of accounts : 70 māḍha
3 bharaṇa
14 gauṇi rice
24 pairs of cloths

24. For making a scaffolding with sloping ramps on the southern side the Pāṭasāhāṇi of Jaṅkiāpaṭa supplied 14 cart-loads of coconut palm trunks and bamboos, the bullock-carters received : 2 bharaṇa
24 gauṇi

25. For making rampant lions for the west and south side of the gaṇḍi 14 pathuriās with Gadādhara Mahāpātra received one instalment of : (Pl. 2 Pl. 47) 30 māḍha

26. For work on the Regaḍā sandstone door-frame (of five bands, Ms. 2) of the Lion-gate, 7 persons, Yogi Mahāraṇā, Nidhi Mahāpātra, etc. received : 30 māḍha

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* Ms. 2 says : Tulā, more likely to be correct.

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27. Cutting to size 3732 stones for the garbha, to 22 stone-dressers (swaṅsyā) : 42 māḍha 3 bharaṇa paddy

28. A team of 27 people working under Gaṅgā Mahāpātra and Kṛṣṇa Mahāraṇā on the amalās and bhūmis of the koṇaka, received according to contract : 203 māḍha

29. For iron girders of 1 hasta (length ?) and 4 aṅgula (diameter ?) for the roofs of the niśā-temples : 3 māḍha

30. Stones arrived from Nīlagiri. When the cāpas reached the gaṇḍa, on unloading the stones, Nidhi Paṭṭanāyaka of Nīlagiri received according to contract : 102 māḍha

Subsequently for the stones : 3077 māḍha

31. For constructing the rathakas of the main temple 8 anurathapathuriās had a contract of 40 māḍha. On completing the anurathas each one received : (Pl. 2, 47) 5 māḍha

LEAF XVIII

1. From the pīḍha-roof of the mukhaśālā a sloping scaffolding 27 hasta long was shifted upto the pedestal of the lion that was to be set up on the garbha.* Seven men who labourad of it for two days : 20 gauṇi

2. On the seventh day of the bright fortnight of Māgha the Parama Mahāśrama came to inspect the works. Thirty-six attendants were engaged for him. Towards their wages : 1 bharaṇa 7 gauṇi

Preparing the house for the Parama Mahāśrama's accomodation : 14 gauṇi

3. On the fifth day of Māgha the work was suspended and all śilpīs with horses, elephants and drums went in procession to the Koñci** river-mouth to receive the Mahāśrama. Expenses : 7 bharaṇa 47 gauṇi

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* The lion was horizontally divided in two parts, the lower part in the pedestal with the crouching elephant must have been inserted in the wall before hand. See Leaf XXI 15, Leaf XLVII, 15, Pl. 47 and App. No. 1.

** Branch of the Kuśabhadrā river.

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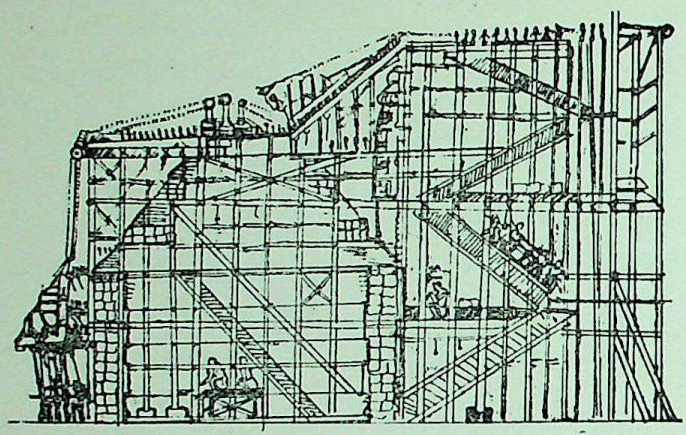

Sketch giving an approximate idea of various phases in the operation of hauling up the big gajasiṁha on to the place on the eastern face of the vimāna, see Leaf XVIII, 4 to Leaf XX, 4.

4. On the 13th day of Māgha Śukla pakṣa the big lion was to be hauled up. A maṇḍapa, from where to view this operation was erected for the Mahāśrama in the Īśāna (North-East) corner. Labour charges : 30 gauṇi

5. On top of the sixth tier (fifth Ms. 2) of the mukhaśālā pīḍhas* iron girders were laid projecting by 4 hasta, and the projecting parts connected in front by another iron girder lying across, on which 7 large pulleys had been fixed by Kāśi Ojhā : 2 māḍha

6. On the upper roof of the mukhaśālā, 3 pairs of khila-pathara for 6 wooden posts were placed, the two middle ones being higher than the others. To make and fix iron-pulleys on top of the posts : 37 gauṇi & 24 gauṇi

7. The portion of the iron girders which projected from the pīḍhas for hauling up the lion were firmly propped up from below with wooden poles : 12 gauṇi

8. A very thick plank was fitted with 3 pairs of iron cross-bars with rings (at both ends) by Kāśi Ojhā, payment : 14 gauṇi

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* Although only one pīḍha is mentioned, it seems inevitable that such contrivances with projecting iron-girders must have been fixed on top of each pīḍha roof.

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9. 72 young men picked for their strength (bheṇḍā) brought the lion-stone by chekā-sāṅgi (extended sāṅgi)* to the scaffolding on the plinth : wages for carrying — 1 bharaṇa

LEAF XIX

1. When the lion reached the scaffolding it was placed with head down on the prabhā and was tied on it with three ropes under the direction of the Sūtradhara and Madhu Mahāpātra. Labour charges : (Pl. 2, 46) — 14 gauṇi
2. Six ropes were gathered two by two and passed over three pairs of wheels. Seventy people pulled the ropes from the top of the mukhaśālā : — 1 bharaṇa 17 gauṇi
3. The plank was pushed from below by 20 people with large āśās, first from the pīṭha, then from the bāḍa (wall-scaffoldings), then from the pīḍhas : — 30 gauṇi
4. (On either side) thirty people with four wooden poles, altogether sixty people propped up the stone when lifted from step to step from the scaffolding of every tier. They received : — 1 bharaṇa 17 gauṇi
5. When the back of the lion came in front of the second pīḍha, 40 people with 10 ropes, 2 tied to the head of the lion, went on the scaffolding of the garbha-gaṇḍi and from there pulled the lion which had reached the projecting girders. They received as wages : — 40 gauṇi

   The people who had pushed from below : — 40 gauṇi
6. At the time of hauling up the lion the drummers were playing the baḍakāṭha** with all their strength : — 14 gauṇi
7. For paṇā and pīṭhā (drink and food) offering to Narasiṁha Mahāprabhu : — 10 gauṇi
8. When the lion-stone was seated on the iron-girders 30 people went on top of the garbha and pulled the ropes fitted on the lion with all their strength. At the same time 30 people with big āśās pushed the stone upwards, standing on the second pīḍha of the mukhaśālā : — 16 gauṇi

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* See Glossary.

** a big drum beaten with sticks.

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9. On the evening of the 13th day of Māgha, when only two watches of the day were left, the lion-stone rested on top of the ceiling of the mukhaśālā and was propped up with 20 wooden poles; (after opening the prabhā, Ms. 2) : 16 gauṇi

10. When the lion reached the top, the Mahāśrama distributed awards to all people who had lifted the stone : 10 māḍha

To 10 pathuriās for the supervision : 30 māḍha

To 3 overseers : 3 māḍha

To the pāiṭāḷas : 10 māḍha

After that the Mahāśrama left (ended his presence).

11. On Caturdaśī in the second watch of the morning, when the drums were sounded, the Mahāśrama returned and was again seated on the maṇḍapa. He made a propitiatory gift of 3 small gold coins to the Brāhmaṇas.

12. To 40 people who pulled the ropes with all their might from the top of the western scaffolding at the back of the garbha : 20 gauṇi

13. When the lion reached the sandhisthala (at the base of the sloping scaffolding) 20 people lifted the lion with uṭhāḷifāsa (on to the śagaḍi) 16 gauṇi

LEAF XX

1. There was a sloping scaffolding from the mukhaśālā roof to the elephant-pedestal inserted in the cavity for the lion. The lion was tied with strong ropes on a śagaḍi with 12 wheels, and for this 10 people received : 10 gauṇi

2. When the lion (on the śagaḍi) was set on the scaffolding, 32 people pulled it with ropes from above and 32 people supported (pushed) it with āśās from below : 46 gauṇi

3. While hauling him up, the lion by its weight shook the scaffolding and 12 people, Nārāyaṇa Mahāpātra, Āgāḍhu Pathuriā, Rāma, Dayā, Suṅguriā, Paṭhāṇi and others fell from the scaffolding. Thirty guards lifted and carried the injured to the Garuḍiā Vaidya. They received : 16 gauṇi

4. The hind-portion (tenon) of the lion-stone was tied with six ropes on which big stones were hung and were let down into the interior of the temple : 6 gauṇi

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5. The Mahāśrama gave orders to 8 pathuriās to quickly close the covering wall above the back of the lion. Those specialists (bindhāṇī) who closed it received : 10 gauṇi

   On behalf of the Mahāśrama awards (piṭhākhiās) were distributed : 10 māḍha

6. On the 7th day of Phālguṇa kṛṣṇa pakṣa 30 people who had hauled up stones for the ceiling by sikāchekā-chanda received : 20 gauṇi

   For supplying stones to the people on the scaffolding who were constructing the garbha : 1 bharaṇa

7. For the sloping ramp of 4 hasta width upto the pedestal of the lion 12 people received : 1 bharaṇa 14 gauṇi

8. From the ceiling above the back of the lion a new scaffolding was erected :

9. For fastening stone-weights on the ropes (of 25 hasta, Ms. 2) hanging from the head of the lion small Dāma Mahāraṇā received :* 3 gauṇi

10. On Phālguṇa śukla daśamī (beginning of Holi) ābira (red powder) for the kārigars : 4 kāhāṇa kauri

11. To sixty people for having carried stones to the garbha on ekādaśī day : 34 māḍha

12. To 13 people for dismantling the scaffolding from the mukha-śālā to the lion : 16 gauṇi

13. For erecting a scaffolding 14 hasta high on all four sides of the mukhaśālā for the finishing work : 1 bharaṇa 21 gauṇi

14. To 14 people working 6 days to lift the stones for the muṇḍi on top of the mukhaśālā, labour charges : 40 gauṇi

LEAF XXI (Ms. 2)

(the first three numbers overlapping the last three of the previous Leaf)

4. For making a scaffolding of 8 hasta on the western side on the order of Gadādhara Mahāpātra 12 people received : 24 gauṇi

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* used at the time of hauling up the lion.

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5. The Sūtradhara had decided that the first ceiling should be finished on Vaiśākha kṛṣṇa aṣṭamī. For building up the first ceiling 24 pathuriās received : 110 māḍha
6. Lakhaṇa Mahāraṇā who had made the coping stone (chatra-śilā)* with a small channel (randhra) received :* 1 pair silk cloth
7. For this (the coping stone) Kāśi Ojhā made 12 copper bāgiās (cramps) and received : 24 gauṇi
8. For carrying the ceiling stones with rounded edges (pheṇiā-pathara) 70 persons received : 45 gauṇi
9. The Sūtradhara sent a letter to the Mahāśrama. The pāik who was sent to Chowdwāra received as travelling expenses : 2 gauṇi
10. From Ekāmrakaṭaka (Bhuvaneśvara) Dāmodar Jenā brought 10 śilpīs. Expenses for the bullock-cart : 5 gauṇi
11. The ceiling was to be closed in the month of Vaiśākha, but the Mahāśrama ordered that it should be completed on Caitra Śukla Navamī. Rāghava Māhārāṇā from Ekāmrakaṭaka completed the ceiling and received : 3 māḍha
1 pair of silken cloth
12. On the Mahāśrama's behalf the Rājaguru presented a golden lotus to Mādhava Bhaṭṭa (the pūjārī). For the pūjā of the ceiling 7 Brāhmaṇas received : 2 māḍha
13. For arranging 6023 dressed and chiselled stones on the ground, the team of 12 people of Gaṅgā Mahāpātr a received : 46 māḍha
14. On a special order of the Mahāśrama, on the 12th day of Caitra in the 12th aṅka 9378 aśrapis had been brought from the Sāraṅgagaḍa Treasury by the Treasury Officer Bhaṇḍāranikāpa. On reaching here the hātiāḷa received : 8 gauṇi
15. For making the big lion in two parts Dāma Mahāraṇā and Nidhi Mahāraṇā received in clearance (Pl. 2 Pl. 43) : 73 māḍha
16. For carrying up the stones a scaffolding was made : 14 gauṇi

LEAF XXII

1. On the sixth day of Caitra 103 swaṅsiās and sāṅgi-people carried the stones for setting up the koṇakas and ten amalās and received : 3 bharaṇa
12 gauṇi

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* See App. No. 6

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2. A team under Gaṅgā Mahāpātra set up the koṇakas and anurathas of the garbha, they received :	14 māḍha
3. Under the direction of the Sūtradhara 34 Mahāraṇās prepared the stones for the anuratha śikharas. Gaṅgādhara Mahāraṇā and 44 paṭhuriās (set them up) and received :	14 māḍha
4. Victualling charges for those who had carried stones up to the scaffolding of the garbha :	10 bharaṇa coarse rice
5. On Akṣaya tritīyā* after terminating the garbha stones (construction), the viṣama with an elephant-frieze of 1 hasta was set up. Gaṅgā Mahāraṇā received :	1 paṇa coconut 3 pairs Kenduli and other cloths
6. To make six Kanyās of 8 hasta for the garbha Gadei Mahāraṇā and Gaṅgā Mahāpātra with a team of 13 workers had a contract of 303 māḍha, they received in clearance :**	230 māḍha
7. Gaṅgā Mahāpātra for a set of 3 Dikpāla images on the garbha, Agni and others, and Gadādhara Mahāpātra for 3 images, total payment (Pl. 33) :	30 māḍha
8. For making various Rājā images of muguni stone on the lower parts (taḷarājabandha) the team of Gaṅgā Mahāpātra was under contract. On this contract they received at one time (Pl. 53) :	43 māḍha
9. The Mahāśrama was to come on Snāna Pūrṇimā (Jyeṣṭha Pūrṇimā). When however he did not come, the box containing cloths for the śilpīs was returned on elephant-back, for which the hātiāḷa received :	30 gauṇi
Four pāiks who went to Biḍānāsī :	12 gauṇi 1 māḍha
10. The śilpīs brought some special mālas (as prasāda) from the great Ṭhākura of Puruṣottama to Ayurbaṅga village (near Gaṅgeśvarī) and buried them there. This became the Iṣṭa of the śilpīs. They received for this celebration :	10 gauṇi
For daily bhoga they received from the stores :	1 gauṇi

* 14th aṅka, *Ms.* 2. Akṣaya tritīyā or third day of Śukla Vaiśākha is the beginning of the Candana Yātrā, auspicious day commemorating the beginning of the Satya Yuga.

** One is still in situ on the southern side of the garbha, one half figure is in the National Museum in New Delhi, three or four are in the new Museum in Koṇārka.

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11. On the western side a scaffolding of 8 hasta was raised.

12. Four persons with Gadādhara Mahāraṇā for making Rāhā-siṁhas (gaṇḍisiṁhas) received in clearance : (Pl. 2, Pl. 46, 47) — 14 māḍha

13. The stones for the rāhā were arranged on the scaffolding by 18 pathuriās, 220 people carried the stones, expenses : — 30 bharaṇa paddy

14. Erecting four temporary pillars of stone bonded with clay to support the projecting pīḍhas on the four corners of the mukhaśālā (koṇaka bandhanī), two towards the garbha and two towards the front, 130 workers had laboured 17 days.* They received : — 14 bharaṇa paddy, 12 gauṇi rice

15. For tying the posts of the scaffoldings with (bāndhaṇi khuṇṭa), ropes of agave fibre (bāramāsī) were supplied by Tikarpaḍā Nāyaka.

16. For transporting stones from Viśvanāthamuṇḍiā (hill) : — 7 māḍha

17. On Śrāvaṇa śukla aṣṭamī one boat with a large muguni stone of 32 hasta** should have started on the Mahā-nadī, but Sidhiādaḷāi, the pilot, failed to conduct the cāpa and was fined 3 māḍha. The pāika Chaḍa Siṁha collected the fine five months later and deposited 7 māḍha into the treasury. He received : — 13 gauṇi, 1 māḍha

18. 70 men, who had carried stone-slabs for the rāhā during seven days, received : — 2 bharaṇa, 10 gauṇi

For the rekhā-śikhara of 28 hasta joined on the eastern side by the team of Gaṅgā Mahāpātra. Nidhi Mahāraṇā received (Pl. 2) : — 10 māḍha

Gaṅgā Mahāpātra : — 30 māḍha

19. For carving the vajramuṇḍis on the garbha-gaṇḍi, a scaffolding for seated work was made for Gadādhara Mahāpātra by 14 pāiṭāḷas who received for 5 days' labour (Pl. 2 Pl. 48) : — 1 bharaṇa, 14 gauṇi

Gadādhara Mahāpātra : — 17 māḍha

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* See Leaf XVI 9 and note, may be clearance.

** Perhaps the stone for the Aruṇa-pillar ?

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20. From Śrāvaṇa śukla trayodaśī to Bhādra śukla trayodaśī 2 śilpīs kept haviṣya (eating only once a day especially pure food) and pūjā was offered while they carved the vajramuṇḍi.* Expenditure : 1 bharaṇa
14 gauṇi fine rice
3 māḍha

Four Mahājanas of Vedapura for keeping the haviṣya also received : 2 māḍha

The Sūtradhara for a Pūjā** on the vajaramuṇḍi received : 2 māḍha
1 pair Baḷagaṇḍiā cloths

21. For having arranged in the north-west corner of the ground the stones for the garbha-gaṇḍi, from the lion-head of the vajramuṇḍi upto the viṣama 30 pathuriās and 224 stone-carriers received : 7 bharaṇa

22. For supplying 50 kurhāḍiās (cramps with points in opposite directions) and 30 bāgiās (cramps with parallel points) Bāsu Ojhā received : 3 māḍha
7 paḷa iron

23. For making the garbha up to the viṣama after the stones had been carried up : 240 māḍha

LEAF XXIII

1. For completing the upper part of the mukhaśālā with muṇḍāḷi and āmalakī 16 pathuriās, Lakhaṇa Mahāpātra and others had a contract of 40 māḍha.
They received : 10 māḍha
To 3 people carrying stones : 6 gauṇi

2. Of the people who fell from the scaffolding, Agādhu and Paṭhāṇi had their arms fractured. Agādhu succumbed. One messenger went to the Rājā of Mayūrbhañj with a letter (carrying this information).
He received a piṭhākhiā : 2 māḍha
14 gauṇi

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* There were however three vajramuṇḍis on the three faces of the vimāna.

** On the day when the lion-heads above the vajramuṇḍi were terminated.

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Daṇḍi, the brother of Agadhu who was working on this site with the Nuāgaḍa team was given for the Śuddhi–(Śrāddha) ceremony (of Agādhu) :	40 māḍha
and again :	3 māḍha
	6 gauṇi
3. Nārāyaṇa Mahāpātra and Gadādhara Mahāpātra were under contract for making 16 smaller Kanyā images for the second pīḍha. After finishing this work, they received in clearance of their dues : (Pl. 67-72)	40 māḍha
	23 gauṇi
4. For the supply of ropes :	1 māḍha
To Kāśi Ojhā and Dāma Mahāraṇā :	12 gauṇi
5. On Dola Pūrṇimā (Holi Festival) the work was stopped and a community feast (Koṭha jantāḷa) arranged. Six cooks received :	12 gauṇi
fine rice from the stores :	30 gauṇi
muṅg :	13 gauṇi
ghee :	2 large pots
The Biśoi of Golara sent 20 bhāra vegetables as a present. Mahanta Bhānudāsa sent 6 bhāra dahi. Dalabeherā of Rupāsa sent 12 pots of milk, 1 kāhāṇa kauri for khaṇḍa sugar, 10 paṇa kauri, 10 gaṇḍā (40 pieces) coconuts came from Naḍiāmaṭha.	
The Superintendent's palanquin-bearers received :	4 gauṇi
Gift offerings to the Sūtradhara :	3 paṇa kauri
	1 pair cloths
3000 banana leaves :	2 paṇa kauri
To the Pujārī of Dadhivāvana (Lord Jagannātha) of the Baḍa Ṭhākura gādi (in Ayurbaṅga)* :	1 kāhāṇa kauri
6. Monthly salaries for the kārigars of the Rupāsa camp :	20 māḍha
For 11 overseers :	46 māḍha
To the water-carriers :	24 gauṇi
7. To ten śilpīs, including Yogi and Lakhaṇa Mahāpātra who did fine jāli work by the side of the wheels** :	30 māḍha

* where the garland of Lord Jagannātha had been buried.

** Finishing the fret-work on the base can only be done after the removal of the greater part of the scaffolding.

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8. Balaśrī came to give payment to the śilpīs. His attendants received : 24 gauṇi

9. When Balaśrī was in the camp the Sūtradhara submitted to him a plan drawn to scale (guṇāgāra) for approval of the Padmakeśara (compound) with the Siddheśvarī Devī temple*, the Horse-gate and the Elephant-gate, which he had prepared on the Mahāśrama's order. After obtaining his approval, a notice was sent by drum-beat to all the camps to inform everyone of this plan. To the drummers : 3 gauṇi

10. To the hātiāḷa : 24 gauṇi
To the grooms (ghoḍā-sāḷiā) : 24 gauṇi

11. On the sixth day of Vṛṣa Balaśrī paid gratuities to 14 sculptors including Gadādhara Mahāpātra, Nārāyaṇa Mahāpātra, Keśava Mahāpātra and Aparti Mahāraṇā : 30 māḍha

12. For making beautiful sculptures on all four sides of the pīṭha-barāṇḍi each person received : 2 māḍha
Total : 10 māḍha

13. Ten people who had carved the wheels with Lakhaṇa Mahāraṇā received : 10 māḍha

14. Ten Madurai sculptors received for creeper-work 2 māḍha each, total : 20 māḍha
Six sculptors from Khiching received : 12 māḍha
The Sūtradhara : 7 māḍha
Aṅgāi Nāyaka : 2 māḍha
Kāśi Ojhā : 2 māḍha
Bāsu Ojhā : 2 māḍha
Sujā Mohamed : 2 māḍha
For the treasury (staff ?)** 7 māḍha

15. Six men who had pulled the ropes over the pulleys Naga, Maṇi, Dharma, Nakhi and others, received*** : 3 māḍha

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* probably erected on the site of the small Sūrya temple, which Purandara Keśarī had built in the 9th century A. D.

** All these items from 11–14 seem to refer to personal awards distributed by the Pāṭamahādevī in recognition of particularly good work, see Leaf XXIV, 1.

*** Most probably for the time when the big lion was hauled into its place on the garbha.

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LEAF XXIV

1. After settling the expenditure of every department 47 māḍha of the cash sent by the Pāṭa-Mahādevī were left over and were put into the Treasury.

2. On the 10th day of Caitra, as a quarrel had broken out among the 42 (pathuriās) who were working on the main temple, orders were sent to stop work. There was a consultation among overseers, who sent a message through two guards (to the Mahāśrama). On their return they received : 10 gauṇi

3. The Vaidyas received : 10 gauṇi

4. Sujā Mohamed, without saying a word, took all his tools and left the work-site. The guard Bandhu Siṁha was sent after him on horse-back and brought him back from the Baḍatotā (big orchard). He received : 7 gauṇi

5. Without saying anything and without asking for leave, Sukhi Mahāraṇā and Bhīma Mahāraṇā went away to Puruṣottama. To prevent further trouble and quarrels, Balaśrī sent four guards, who arrested them and took them to the Biḍānāsī jail. The four guards received : 28 gauṇi

6. One woman labourer named Suni was made pregnant by a worker Samanātha and both had run away. One guard Banu went to Gopa (village) and there got hold of them. For this he received : 3 gauṇi

   On Samanātha undertaking to maintain (Suni) for life (this affair) ended and both became again eligible for work on the site.

7. To 35 Pathuriās for work on the main temple : 35 māḍha

8. To 12 people including Lakhaṇa Mahārāṇā and Dāsa for making Cirā-siṁhas for the mukhaśālā : 14 māḍha
   1 bharaṇa
   7 gauṇi

9. Paṇḍita Mānagovinda Rājaguru from Narasiṁhapura Bhuktā* Paṇḍita Ānanda Ratha from Narasiṁhapura Śāsana

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* Bhuktās are Tāntrics.

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Bhuktā Sadānanda Dāsa Upādhyāya
Paṇḍita Ādinārāyaṇa Ācārya
Aniruddha Nārāyaṇa Phaudāra
Paṇḍita Mukhi Viśvaksena Iengāra and
Paṇḍita Pātrupānu (?)
these seven Paṇḍitas were on the order of the Mahāśrama sent by Baḍajenā Viśvanātha Hāricandana for giving advice. A hut and attendants were put at their disposal for eight days : 7 gauṇi

To the Paṇḍitas : 44 gauṇi

10. On the 6th day of Mīna the Paṇḍitas explained the position for the piṇḍis of the 12 Ādityas according to the Śāstras to Nārāyaṇa Mahāpātra, who marked the positions of the pedestals with the thread :* 2 gauṇi

11. On Akṣaya tritīyā (3rd day of Vaiśakha śukla pakṣa), after purifying the ground, one big stone was put under the banyan tree** on the east side, and there a Homa was performed. When the Sūtradhara measured out with the thread (sutali) the figure of Mahābhāskara on the stone, Mānagovinda Rājaguru marked out (cihna) the head of the image according to the Dhyāna,*** and gave it an agyānamālā from Puruṣottama (sanction of Puruṣottama).**** (Pl. 76)

For this the Rājaguru received : 2 māḍha

The Sūtradhara received : 1 māḍha

For the Homa, from the stores : 3 kuñcā ghee

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* These are not mentioned anywhere else. But on the design of the Ms. on Architecture there are two round piṇḍis in each corner of the mukhaśālā, which may be for the Sūrya Śaktis, according to the Maṇḍala Sarvasva. Three piṇḍis are also found on the Mahābhāskara yantra in the Sūrya Tantra, and there they represent the 12 Ādityas.

** This Banyan tree in the Maitreya forest was particularly sacred to Mahābhāskara from olden times, (Sūrya Tantra and Brahma Purāṇa).

*** See Dhyāna of Mahābhāskara according to Sūrya Tantra and the Saudhik-Āgama in Introduction, para 7 : Conception of the Sun God in the Tantras.

**** When the carving of the Mūlamūrti begins, the Brāhmaṇa has to mark the place of the image's head with a small golden chisel while reciting the Āśuḥ śisāno Mantra (White Yajurveda, Ch. XVI). This is called "Maulinirdhāraṇa" in the Pratiṣṭhā Pradīpa and is meant to remove obstacles. Pratiṣṭhā Pradīpa published by Sri Venkateśvara Press, Bombay 1894.

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15. On the 2nd day of Vṛṣa Śaṅkarānanda Svāmī Narasiṁha Sarasvatī of the Śaṅkarānanda Maṭha came on the invitation of the Mahāśrama, to see the work-site. Seven Śrotriya Brāhmaṇas were engaged for him for eight days. They received : 1 bharaṇa 7 gauṇi

For the Pāda-pūjā of the Svāmī (foot washing ceremony) : 3 māḍha 24 gauṇi

The Sūtradhara placed one Gaṅga māḍha to the Svāmī's feet. The Svāmī returned the coin to the Sūtradhara as a return-gift and requested him to make an image of Śaṅkarācārya in Siddha-Yoga posture.*

For making this a stone was given, and he received a piṭhākhiā (special award) of : 1 māḍha

LEAF XXV

1. For the expenses of the Svāmī (Śaṅkarācārya) of Bāli Maṭha (in Puruṣottama) and his attendants : 3 māḍha gold
2. Gaṅgā Mahāpātra imposed a fine on Yogi, the jāli-cutter. The pāik Dhara Siṁha collected the fine and deposited 2 māḍha in the Treasury. He received : 7 gauṇi
3. For carving the pillars of the portal on the Eastern side a team of ten people under Gadādhara Mahāpātra had received 10 māḍha, and now received the rest : (Pl. 61) 70 māḍha
4. For making an image of Viriñci Narāyaṇa** (for the centre) below the bāṅkapaṭi, Gaṅgā Mahāpātra received : 17 māḍha
5. For making two lions below the stairs three persons including Yogi Mahāraṇā received : 2 māḍha
6. Upto the 4th day of Kakaḍā in the 11th aṅka,*** 342 people who had gone to quarry stones returned from Kerāṇḍimāḷa, Arāgaḍa, Viśvanātha Jagadaḷa, Tāpaṅgamāḷa, Nīlagiri and Bāṇeśvara, I wrote down their accounts.

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* Most probably to be placed somewhere in the anurathas of the Padmakeśara temple. Now in the Koṇārka Museum.

** According to the Dhyāna, a six-armed Sūrya image, holding 2 padmas, 2 Veda-pustakas, a kamaṇḍalu and an akṣamālā.

*** *13th aṅka, Ms. 2.* But subsequently always mentioned as 11th aṅka. See also App. No. 15.

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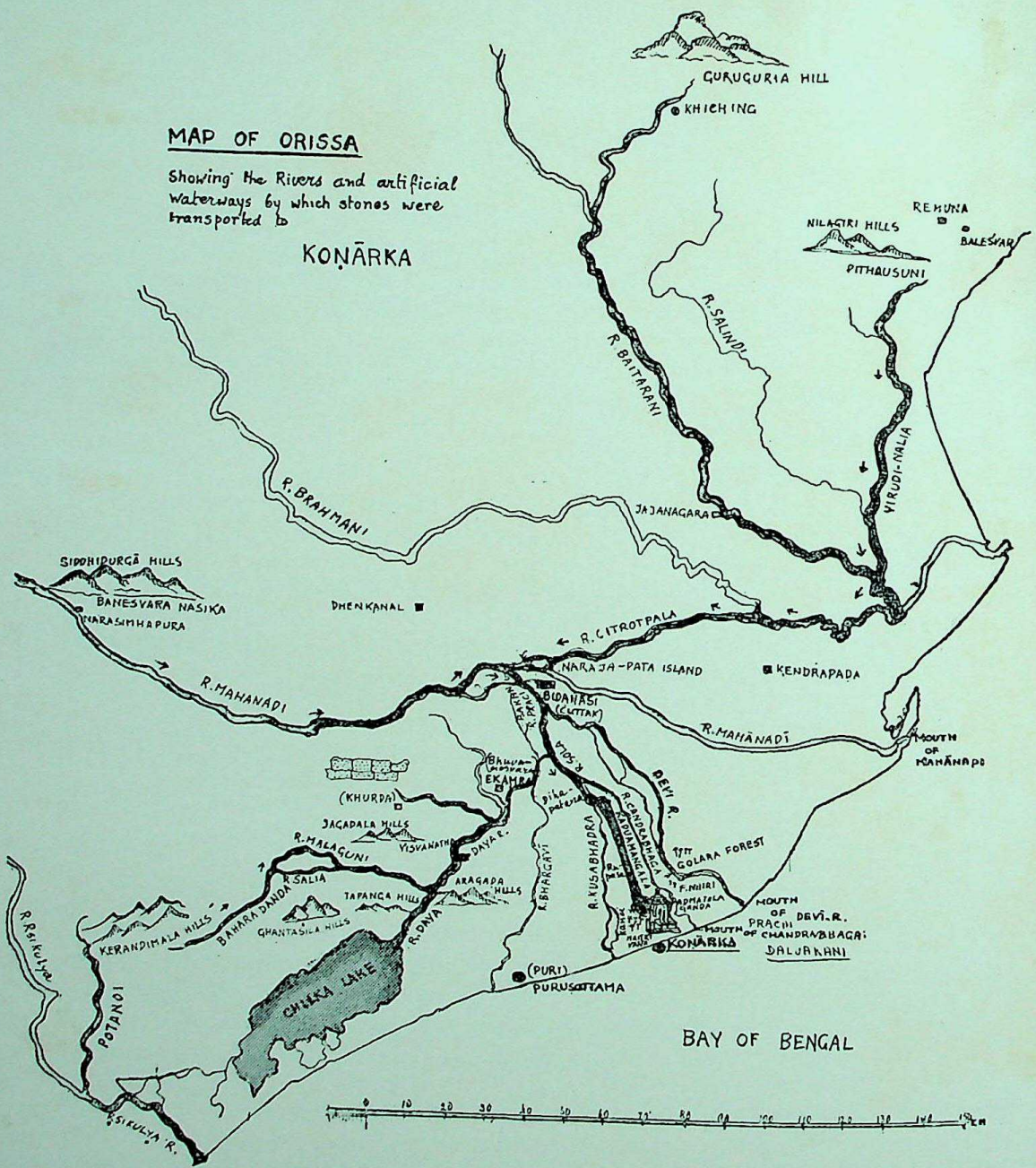

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The team which had stayed in Kerāṇḍimāḷa for 7 months and 14 days in the 11th aṅka, under the leadership of Kerāṇḍimāḷa Subudhi, for the maintenance of their camp : 70 māḍha
4 bharaṇa
17 gauṇi rice

For clothing : 13 māḍha

Sulphur powder (bāruda) for explosives to blast stones : 7 māḍha

Stone-blasters : 7 māḍha

30 stone-cutters : 13 māḍha

324 people carried and loaded the stones on 70 cāpas. The Cāpadaḷāi (chief boatman) of Ṛṣikulyā river brought the boats to the Dayā river through the Bāhāradaṇḍā canal, to the Saḷiā and Malāguṇī river. He received : 70 māḍha

22 bharaṇa paddy for this group was supplied from the Bhīma Nagara Daṇḍapāṭa (stores).

7. The group which had gone to Arāgaḍa and the barren hill of Jagadaḷapura under the leadership of Daḷabeherā of Tikarapaḍā and the Lenkā of Jagadaḷapura, stayed there four months and 13 days in the 11th aṅka. For the maintenance of their camp : 30 māḍha
3 bharaṇa
7 gauṇi

Powder for stone blasting : 43 māḍha

The stone blasters : 11 māḍha

The stone-cutters : 20 māḍha

230 people who carried and loaded the stones* on the cāpas, and the boatmen of 31 cāpas who transported the stones upstream on the Dayā and then to the Sola river, received : 130 māḍha

64 bharaṇa rice were supplied to them from the Tarāboi in Khileśvarī Daṇḍapāṭa. This (consignment) was for the team of Gadei Mahāraṇā.

8. From the Arāgaḍa Hills 1307 large slabs of Regaḍākuṇḍā stones were quarried under the supervision of Vīra Bhaṭṭa and Nidhi Mahāraṇā. They stayed 3 months and 10 days of the 11th aṅka at the Tarāboi camp. 70 māḍha

* No mention what stones.

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Rice from the Tikarapaḍā stores : 17 bharaṇa 12 gauṇi

Powder for stone-blasting : 10 māḍha

The stone-blasters : 14 māḍha

70 people cutting stones to size : 34 māḍha

430 stone-carriers : 340 māḍha

Three cāpas brought the stones by a canal excavated for the purpose of connecting the quarry to the Dayā river, then upstream through the Dayā to 10 large boats on the Kuākhāi and thence to the Sola river. Expenses : 30 māḍha

9. 234 slabs of red Regaḍā-sāhāṇa (sand–) stone were quarried from Tāpāṅga Bhīmatāṅgi under the supervision of Vīramalla and Nārāyaṇa Mahāraṇā. They stayed there for 4 months during the 11th aṅka. Expenditure for the Tāpaṅga camp were : 40 māḍha

Stone-blasters : 12 māḍha

Powder for stone-blasting : 7 māḍha

Stone-cutters for cutting stones to size : 17 māḍha

For Pathuriā Banśī and stone-carriers : 34 māḍha

The stones were brought upstream through the Dayā river to the Mahānadī*, then to the Sola river and through Udipura daṇḍā (canal) to the Padmatoḷā gaṇḍa. Expenses : 70 māḍha

10. For fitting pegs of Gambhāri wood in the quarry for splitting and dislodging muguni stones at Piṭhausuṇi Hill of Nīlagiri Bāhāramuṇḍa (village) Ratna Śarmā received : 10 māḍha

Nārāyaṇa Mahāpātra, the Chief of stone-quarriers and 170 people stayed for 7 months at Piṭhausuṇi. Expenses : 43 māḍha

Stone-cutters cutting stones to size : 53 māḍha

To the persons who carried the stones by sāṅgi to the Viruḍināḷiā : 70 māḍha

The stones were transported on cāpas from Viruḍināḷiā to the Mahānadīnāḷiā, and then along Bhasāṇadaṇḍā to the Bāhāriā-jora stream and thence along Citrotpaḷāgaṇḍa to the Sola river :

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* This deviation from the direct route may have been necessitated by shallow waters in the Sola river. see Leaf XII, 10.

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Rice and other provisions were supplied from the Remuḍā-daṇḍapāṭa. The chief boatman received : 130 māḍha

11. 730 slabs of Bāliā Haḷadiā sāhāṇa (yellow sandstone) were quarried from Siddhidurgā Hill in Bāṇeśvara Nāsi under the supervision of Vīra Ojhā and Madhu Mahāraṇā. They remained at the Budheśvara camp 3 months and 18 days in the 11th aṅka. Camp expenditure : 47 māḍha
For cutting long slabs : 7 maḍha
The stones were loaded on rafts on the Mahānadī and then transferred on cāpas. On reaching the (Padmatoḷā) gaṇḍa the carriers received : 34 māḍha
The boatmen : 38 māḍha
To the Head of the stone-cutters Vīra Baḍajenā* : 2 golden bracelets of 3 tolās

12. For carrying stones for the head-portion of the mukhaśālā 70 people received : 3 māḍha
2 bharaṇa
8 gauṇi

LEAF XXVI

1. For the āmalakī above the padma-piṇḍi of the mukhaśālā once : 10 māḍha
2. To 817 śilpīs of the Rupāsa camp in clearance of previous miscellaneous work : 100 māḍha
3. For the Cirāsiṁhas of the mukhaśālā, Dāmodara Mahāraṇā with seven others received : 10 māḍha
4. On the 3rd day of Mithuna 17 people including Lakhaṇa Mahāraṇā and Govinda Mahāpātra, after finishing the work of the muṇḍāḷi and āmalakī of the mukhaśālā received : 40 māḍha
5. Nārāyaṇa Mahāraṇā and 5 other people had a contract of 24 māḍha for making 8 weight-carrying kanyās (bhārakanyā) for supporting the āmalakī and received : 10 māḍha
6. For carrying 4 sedant lions (vasāsiṁha) and 4 cirāsiṁhas by sāṅgi onto the scaffolding around the mukhaśālā, thirty people for every lion, 240 in all, worked for three days : 1 bharaṇa
24 gauṇi

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* There is never any mention of a transport of stones by sea, nor of a sea-port at the mouth of the Prācīriver, as postulated in a report of the Archaeological Survey of India 1902–3. All navigation for the transport of stones appears to have been effected through inland river routes.

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7. Setting the lions on their pedestals below the aḷāśrī, 15 pathuriās under the supervision of Dāma Mahāraṇā worked for 8 days (Pl. 75) : 1 bharaṇa 30 gauṇi

8. For building 15 hasta of the upper garbha above the (big) lion, to 74 kārigars including Lakhaṇa Mahāpātra, Dāma Mahāpātra and Narasiṁha Mahāpātra : 82 māḍha

9. For fret-work in the khāndis (gupta-jāli work) in two strips by the side of the rāhā on the front of the main temple, to Dija Mahāraṇā : 3 māḍha

10. Gadādhara Mahāpātra was given a large blue muguni stone from Nīlagiri, 28 hasta long, to make a viśvakāṇḍa* pillar with a bhadra-pīṭha** for the front of the Lion-gate of victory (Vijaya siṁha dvāra). With 12 other pathuriās he was under a contract of 70 māḍha with down payment of (Pl. 3, 83) : 20 māḍha

11. On the 3rd day of Kakaḍā, 40 pāiṭāḷas and 170 men who had during the rainy season carried stones from the cāpas received clearance : 2811 māḍha

The remaining 48 stone-carriers received, for lifting large stones : 153 māḍha

Eleven accounts clerks (kārji), eight black-smiths (ojhās) and ordinary iron-workers (kamāra) received together : 84 māḍha

Three overseers : 8 bharaṇa

12. The shop-keepers of the Rupāsa and Pāṭeḷī camps paid their taxes :

Kauris :	3 kāhāṇa, 7 paṇa
Bādshah coins :	230
Punch-marked coins (geḍi) :	200

To the Tax-collectors Nārāyaṇa Siṁha and Rāmacandra Uttarakavāti : 13 gauṇi 2 māḍha

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* A sixteen-angled pillar is called Viśva-kāṇḍa. This tallies with the configuration of the pillar, now in front of the Jagannātha Temple in Purī.

** Square outlay with three, five or seven divisions projecting stepwise at right angles, as used for temple-ground-plans.

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13. Sūtradhara's salary : 2 māḍha
The Sūtradhara's attendants : 28 gauṇi
Sevakas (attendants) of Gaṅgeśvarī Devī temple : 14 gauṇi
To the Knowers of Śilpaśāstras (Śilpajña) of Vedapura : 1 bharaṇa 24 gauṇi

14. To 46 people carrying stones for the muṇḍāḷi of the mukhaśālā under Lakhaṇa Mahāraṇā : 1 bharaṇa 7 gauṇi

LEAF XXVII

1. When the scaffoldings became loose, 12 people worked 20 days to tie and secure them, labour charges : 3 bharaṇa 14 gauṇi

2. Four overseers : 8 māḍha

3. The five store-rooms were enlarged and repaired, and two had the thatch replaced. Four workers received : 2 gauṇi

4. On the New-year day (Sunyā)* Vīravara Paṭṭanāyaka Jadu Sānta came on the orders of the Mahāśrama to make an Inventory of the stores.
To the palanquin-bearers : 28 gauṇi

INVENTORY OF THE STORES

(written in oblique lines with a different hand writing)

ŚRĪ :

Paddy=720 large oḷiās (round containers made of paddy-stalks) of 36 gauṇi each

Biri=70 puḍuga (oblong containers made of paddy-stalks) of 25 gauṇi each

Muṅg = 28 puḍuga and 7 puḍuga

One wooden chest containing=12 pairs silken cloths
70 pairs cotton cloths
300 towels (gāmchās)
8 hasta red cloth

* *14th aṅka, Ms.* 2.

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2 elephant tusks

42 paḷa raw iron-lumps

217 small logs of wood (garaḍā=length of timber)

203 wooden logs, 6 hasta long

7 coils of rope, each of 100 hasta

2 pots of til-oil

2 sealed packets of sal-resin (jhuṇā)

1 sealed box containing :

214 small gold māḍha

7017 large māḍha

430 silver Bādshāh coins

130 punch-marked coins (gedi)

6 toḷā 2 maśā kuru-jātaka gold (10 māṣā in 1 tolā)

Big and small chisels=24 paḷa (measured by weight)

1 silver seat (khaṭuli)

1 leather horse saddle

1 howdah made of ivory

12 sieves (spears, Ms. 2)

12 kuñcā borax (tāṅgaṇā)

6 paḷa lead

12 padlocks with screw-keys (kunda-kolopa)

4 khaṇḍās (curved swords)

2 wooden howdahs.

In the store-room for iron and hardware

30 double-folded bellows

80 chisels (guṇṭi)

100 crow-bars (śāvaḷa)

1 silver-stick

3 big cauldrons

12 big basins for making karāḷa

28 iron-pulleys

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3 large iron-pulleys of 1 hasta (diameter)

24 water-pots (loṭās)

12 big vessels

2 brass-vessels (garā)

1 stone image of the old Pīṭha (temple)*

1 large iron-container for oil

12 iron rammers

10 iron laddles for karāḷa melting

1 iron chain with 5 strands (1 ring with 5 iron-chains ?)

4 double torches (do-muhā-maśāla)

14 torches with long handles (kāṭhi maśāla)

20 rolls straw-mats (maśiṇā), each containing ten pieces

1 Mugali derri (woven mat)

2 glass candelabra with large moon-like centre-pieces (both hanging from the ceiling)

72 iron cramps (bāgiās)

1 iron water-pot (ḍhāḷa)

20 funnels (for pouring lead into the smelting crucibles)

1 iron girder of 24 hasta with 3 wheels was lying on the sand. Order was given that it should be carefully kept on stone-supports.

In the Store-room for wood

3 large wood-saws for sawing planks

21 bandhana planks

20 mango planks

3 tiṇiā planks (broken)

2 copper crucibles, one mis-shapen

14 copper pipes, all broken

1 silver handle of a saffron coloured hand-fan

214 khila-pathara (round ring-like stones for holding poles),

22 āśā

---

* This appears to be the old Sūrya image of the temple built in the 9th century by Purandara Keśari, which after the completion and consecration of the new Padmakeśara temple was immersed in the ocean as mentioned on Leaf LXIII, 1.

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In the elephant stables

1 howdah, broken

8 aṅkuśa (elephant-goads)

1 cloth cover for the howdah (banāta), torn

LEAF XXVIII

Stones disposed on the work-sites

On the eastern side of the temple :
5 stones 18 hasta long, 1 muguni (akarma=unworked or unworkable)

270 and 30 smaller stones

On the western side of the temple :
211 stones with anuratha carving

On the southern side, reaching up to the stairs :
314 stones with rāhā carving, in the order in which they were to be placed under the control of Vīra Mahārāṇā (the pathar risāḷiā=tally man)

On the northern side of the temple :
470 smaller stones

On the pīṭha :
Stone flags cut to size for laying the floor, 12 piles of 2 koḍi each (1 koḍi=20 stones), 480 stone flags in all.

On the berm (aḍaṅga)
140 stones
7 large stones below the eastern portal

On the scaffolding of the mukhaśālā there were stones cut to size for the mukhaśālā muṇḍi (head)

170 stones of 1 hasta were recovered from the camps of the Śilpis and deposited.

Stone kept with the Śilpis for work :
With Lakśmaṇa Mahāpātra=1 large stone
With Dāmodar Mahāpātra=1 large muguni stone
With Nārāyaṇa Mahāpātra=2 stones for 2 horses
With Gadādhara Mahāpātra=1 long large slab
With Nidhi Mahāpātra's team of 10 Śilpis=12 muguni stones

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Contents of the Common-room (basā-uṭhā-ghara) :

1 wooden chest
3 pākhavāj (drums)
1 set Śrīmad Bhāgavata-Purāṇa placed on a gadi (for worship)
1 image of Dharma Nirañjana Ṭhākura in a portable vimāna*

Contents of the Community kitchen :

24 big cooking vessels
32 small cooking vessels
12 wooden lamp-stands (rukhā)

In the Iron foundry :

Nothing

In the Rājā's camp :

1 low seat (khaṭuli)
1 leaking brass loṭā with a spout (jharī)
2 ivory bed-steads (palaṅk)
2 big brass ornamented lamp-stands
1 spittoon

In the Rupāsa Community Camp :

Nothing from Mahāśrama's stores
4 stone-tubs (kuṇḍas)
12 long torches (kāṭhi maśāla)
Tools with the śilpīs according to list (not given)

In the Maṭha, where Mahanta Beṇudhara Dāsa was living :

1 Dadhivāvana image** (Lord Jagannātha's local name)
1 bell for pūjā
3 palm-leaf manuscripts

In the lodgings of the Sūtradhara :

1 brass-tub
2 big water-vessels
1 wooden bedstead (palaṅk)

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* Since the 12th century images of popular worship were combining attributes of various divinities, Hindu and Buddhist. Here Dharma Nirañjana Ṭhākura may be representing Sūrya. See Introduction Para No. 6 : The Sun God in Orissa.

** See note for Leaf XXIII, 5

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1 low seat (khaṭuli)

1 lamp-stand

1 locked wooden box on wheels, keys kept with the Sūtradhara. The objects around the Narasiṁha image* are not required to be listed.

In the Deuḷi camp :

Nothing belonging to the general stores.

In the shop only one broken wooden chest.

I have completed the list of the contents of the Mahāśrama's stores today, Wednesday, the 9th day of Bhādra śukla pakṣa. This symbol (santaka) is mine : Vīravara Paṭṭanāyaka (Auditor).

LEAF XXIX, Ms. 2

On Bhādra śukla daśamī the Auditor (Āḍhatiyā karaṇa) Vīravara Paṭṭanāyaka checked the records of the supplies received from other stores. These are the things :

From the stores of Rāhāṅga Dakṣiṇa Rāḍasa came yearly for victualling :	1034 bharaṇa
From Kṛttivāsa Daṇḍapāṭa :	2487 bharaṇa paddy 234 oḷiā biri
From the Bakreśvara granary of Koṭhadeśa : (in Nimapaḍā)	3140 bharaṇa 200 chelās coconuts (64000 pieces) 234 bharaṇa biri 33 bharaṇa campā paddy
Total from all the Viṣayas (Districts) :	30214 bharaṇas

* In the Balukeśvara temple in Balapura near Sakhigopala there is an image of Narasiṁha in Yogāsana, which local people say was brought there by Śivai Sāntarā, the Sūtradhara, since it was the place of his Father-in-law. In style it is very much like Koṇārka sculpture work.

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The Overseers had received numerous presents from all over the State :

From the Treasury of the Puruṣottama temple : 4503 aśrapi
3472 punched marked gold coins

Annually : 3408 bharaṇa paddy

Vīravara Paṭṭanāyaka inspected all the places :

The central stores or general stores, granaries, work-sites, camps of the śilpīs and Mahāśrama's camp.

Sāmanta Paramardi Suāsamalla Balaśrī Bhogika Siddhi has, by collecting, arranging and listing all these stores, earned credit for all times to come.*

This person (the Auditor) has audited these.

LEAF XXX

This is the santaka (seal) of Vīravara Paṭṭanāyaka.

1. Vīravara Paṭṭanāyaka and Jadu Sānta, who had come to make the inventory of the stores stayed for 12 days, expenses: 1 māḍha 23 gauṇi

2. On the fourth day of Bhādra one elephant died, for his carriage and burial : 24 gauṇi

3. Sānta and others went back to Puruṣottama, for their journey on elephant-back : 12 gauṇi

   After locking the store-room, the accountant and the store-keeper went to Puruṣottama on elephant-back. Expenses for their journey : 24 gauṇi

4. On the New-Year (Sunyā) Viśi (Viśvanātha) Mahā-pātra sent a mūrti to Puruṣottama as a Sunyā present.

   He received a piṭhākhia (award) of: 1 māḍha

5. To 16 pathuriās under the supervision of Lakhaṇa Mahā-pātra, for making images : 2 bharaṇa 14 gauṇi

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* This may be an obituary for the Brother-in-law of Narasiṁha Deva, who fell in the war against the Muslims of Bengal.

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6. To eight watchmen three months' victualling charges : 1 bharaṇa 7 gauṇi

7. On the 5th day in the month of Tulā kṛṣṇa pakṣa, when the śilpīs returned to work, 230 were lodged in the Rupāsa camp. They received : 7 bharaṇa 27 gauṇi

8. The Madurai śilpīs received for 10 images : 2 māḍha

9. 178 labourers came and received advance : 1 bharaṇa 70 gauṇi

10. On the 12th day of Tulā*, 11 śilpīs, Dāma Mahāraṇā, Lakhaṇa Mahāraṇā, Narasiṁha Mahāraṇā and others, who had built 5 hasta of the garbha, received : 2 bharaṇa 17 gauṇi

11. Under the supervision of Yogi Mahāraṇā eight men had prepared on the ground the stones for 7 hasta of the beki-muda (covering roof under the beki) of the temple : 1 bharaṇa 27 gauṇi

12. Seven men who had worked ten days for bringing up the stones to the garbha : 1 bharaṇa 11 gauṇi

13. For putting the cramps on the alāśrī of the mukhaśālā, to Vīra Kumāra and Dayā Mahāraṇā and four others, seven days' work : 12 gauṇi

14. Yogi Mahāpātra, Nidhi Mahāpātra, Narasiṁha Mahāpātra and 40 other pathuriās were given a contract of 10 bharaṇa and 40 māḍha for making the western Niśā-temple, they received down payment : 1 bharaṇa 24 gauṇi 7 māḍha

LEAF XXXI

1. Ananta Mahāraṇā, Dāma Mahāraṇā and 40 other śilpīs were given a contract for work on the southern Niśā-temple of 10 bharaṇa 40 māḍha, down payment : 1 bharaṇa 24 gauṇi 7 māḍha

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* *In the 14th aṅka, Ms. 2.*

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2. Rāma Mahāpātra, Aparti Mahāpātra, Vidyādhara Mahāpātra with 40 pathuriās were given a contract of 10 bharaṇa and 40 māḍha for the northern Niśā-temple, down payment : 1 bharaṇa 24 gauṇi 7 māḍha

3. On finishing the fine chisel-work on three sides of the western Niśā-temple, Govinda Mahāpātra with four people received, on a contract of 27 māḍha : (Pl. 39) 17 māḍha

4. For making and arranging on the ground sixteen large stone-sectors of the āmaḷakī* Nārāyaṇa Mahāpātra and 14 people received, on a contract of 24 māḍha, down payment of : 10 māḍha

5. 20 people under Yogi Mahāpātra, 10 people under Ananta Mahāpātra, 20 people under Rāma Mahāpātra, for carrying stones and water, received monthly wages : 2 bharaṇa 8 gauṇi

6. For making 3 wooden double-doors in trellis-work (jāli-dvāra) with brass-knobs in form of lotuses for the lower rooms of the three Niśā-temples, Narasiṁha Mahāraṇā carpenter and 3 other carpenters were given each a contract of 12 māḍha. Each of them received : 7 māḍha

7. For bringing three iron girders from the stores onto the scaffolding of the 3 Niśā-temples, 7 men worked 7 days : 2 bharaṇa

8. On the 10th day of Kanyā śukla pakṣa, Sūtradhara ordered 12 kārigars to get 80 stone slabs, 40 for each side for quickly covering the roof. Of these 20 had their corners on two sides indented (dvikhaṇḍita). They received : 2 bharaṇa 14 gauṇi

9. Rāma Mahāraṇā and 3 pathuriās, for closing by means of trowels with karāḷa and stone-powder the joints between these ceiling stones, set for the base of the muṇḍi-pathara (coping stone in form of a padma), advance :** 24 gauṇi

10. When Sūtradhara measured out the (roof of the) main temple (for placing the muṇḍi-pathara), Dāsa Mahāraṇā who held the thread received : 2 gauṇi

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* See App. No. 7.

** also called chatraśilā or mudrāśilā, see App. No. 6.

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11. Dāma Mahāraṇā had taken a piece of 5 hasta (diameter) fine sandstone for making the muṇḍi-pathara. Of this he made a circular, umbrella-like form of 2 hasta height, carved in the form of a lotus having a diameter of 3 hasta 10 aṅgula with a raised edge (danta). He received : 1 māḍha

12. For performing the pūjā on the muṇḍi-pathara the mahājanas of Vedapura received : 3 paṇa kauri
Rājaguru Narasiṁha received : 7 paṇa kauri
24 gauṇi
Sūtradhara received : 1 pair cloths
Aṅgāi Nāyaka for setting the stone : 1 pair cloths

13. On Daśaharā the pūjā of the stone was performed. On Trayodaśī, in the third watch of the day, Aṅgāi Nāyaka, Baṁśī Mahāpātra and others carried the stone on their shoulders with new gāmchās and made three times the circumambulation of the temple. Then they handed it over to the men who carried it up into the scaffolding (cāruās who are not paid for pūjā work). All three (the above named) received : 3 māḍha elephant-marked

LEAF XXXII

1. At the height of the viṣama a round open scaffolding (śunyacāra) had been erected on instructions of the Sūtradhara and the muṇḍi-pathara suspended on it. For this Yogi Mahāpātra and 4 pathuriās received : 2 gauṇi

2. Under the guidance of the Sūtradhara 27 experienced śilpīs covered and closed the roof (above the muṇḍi-pathara). After eight days' labour they received : 4 māḍha
24 gauṇi

3. For making two portable images (vijaya pratimā) in bronze, one of 1 hasta 7 aṅguli and the other of 1 hasta less 1 aṅgula, 2 paḷa (16 seers) bell-metal and also wax :* 3 kāhāṇa
2 paṇa kauri

To make a foundry for Bhagavān Nāyaka of Buḍhāliṅga Pāṭaṇa for casting the vijaya pratimās the cost was : 24 gauṇi

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* See Pl. 109.

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4. On the 9th day of Kārttika were given from the stores :

gold	2 tolās
lead	1 tolā
iron	1 tolā
silver	3 tolās
copper	1 tolā
Bell-metal (kāṁsya) 15 bhari (tolā) for making bronze (chaṇā-pītaḷa)	

After preparing the wax-model, he (Bhagavān Nāyaka) took it to Puruṣottama to show it to the Mahāśrama. Expenses for the journey : 2 māḍha 24 gauṇi

5. Four people who had worked two days for plugging gaps around the chatra padma-muṇḍi-śilā (muṇḍipathara) with small hard stones : 10 gauṇi

6. Nārāyaṇa Mahāpātra and ten pathuriās had carved stones in the shape of rāhā and anuratha and other parts of the garbha-gaṇḍi : 10 māḍha 7 bharaṇa 16 gauṇi

7. For the fine chisel-work (sūci-kāma) on the southern and northern Niśā-temples : (Pl. 39) 30 māḍha

8. For making the Aruṇa-pillar Gadādhara Mahāpātra with 12 people received clearance : 40 māḍha

9. For carrying up stones 30 people received : 2 bharaṇa 12 gauṇi

10. For having worked on the wheels, to Lakhaṇa Mahāraṇā : 4 māḍha

11. For work done on the aḷāśrī and the piṇḍi of the mukhaśālā, to the craftsmen : 40 māḍha

12. Wages (vartana) to the śilpīs of the Rupāsa camp : 8 bharaṇa 14 gauṇi 204 māḍha

LEAF XXXIII

1. Wages (vartana) to the śilpīs of the Duāi camp : 106 māḍha 6 bharaṇa 14 gauṇi paddy

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2. For making and fitting two makara-heads of muguni stone as gargoyles, one of 2 hasta for the mukhaśālā and one of 3 hasta for the northern side of the garbha below the Niśā-temple, ten people including Gaṅgā Mahāpātra and Baḍa Nārāyaṇa Mahāpātra received : 13 māḍha

3. Viśvanātha made a crocodile head as a gargoyle (for the Devī temple) and received : 10 māḍha

4. For the bigger makaras Viśvanātha and Kunā, the son of Gadādhara Mahāpātra received : 13 māḍha and 12 maḍha

5. On the 3rd day of Kanyā in the 14th aṅka* the floor inside the garbha was flooded to test the outflow of the water through the drains. Those who brought the water and cleaned the floor received : 10 gauṇi
and also a permanent appointment as temple-cleaners.

6. When the work on the western Niśā-temple was completed Narasiṁha Mahāpātra received on behalf of 40 pathuriās : 34 māḍha

7. For work on the southern Niśā-temple to Dāma Mahāraṇā : 34 māḍha
For the northern Niśā-temple to Vidyā Mahāpātra : 34 māḍha

8. For making two makaras of 4 hasta for the bāṅkapaṭi on the Eastern side Nārāyaṇa Mahāpātra received : (Pl. 63) 12 māḍha
Choṭa Madhu Mahāpātra received : 10 māḍha

9. Viśvanātha Mahāpātra for a four-armed image of Nārāyaṇa, after deducting the cost of the muguni stone : 4 māḍha

10. On the occasion of going to the Mārgaśira Thursday Festival (Lakṣmī Pūjā) 46 śilpīs received : 70 māḍha
1 bharaṇa
12 gauṇi rice

11. For building the raṅgapīṭha (upper pīṭha) of the Bandāpanā maṇḍapa a team of 12 people under Gaṅgā Mahāpātra and 24 people under Nārāyaṇa Mahāpātra received : (Pl. 91–92) 43 māḍha

12. For making the ceiling slab with a lotus (muda-śilā)** 2 hasta high 12 people with Viśvanātha Mahāpātra were given a contract of 70 māḍha, advance : 20 māḍha

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* *14th aṅka, Ms. 2.*

** The big stone with a lotus in the centre, on whose petals musicians and dancers were carved, destined to form the ceiling of the bandapanā maṇḍapa, is now in the Koṇārka Museum. (Plate 93)

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13. Dāma Mahāraṇā for four cirā-siṁhas : (Pl. 91) — 12 māḍha

14. For 3000 bricks of 1 muṭhuṇiā (muṣṭi) for a well, made at Bālipāṭaṇā : — 1 bharaṇa 7 gauṇi

15. For digging a well near the kitchen-building and another near the mukhaśālā Dāma Muduli and 230 other people received : — 36 māḍha 8 bharaṇa 12 gauṇi

Purchese of hiñjala* wood (for the ring at the bottom of the well) : — 11 gauṇi

16. To the team of Dāma Muduli for digging a large well near the Guṇḍicā temple :** — 13 māḍha

For carrying bricks 224 people received : — 23 bharaṇa

17. Seventy bullock carts full of paddy arrived from Bhīma Nagara Daṇḍapāṭa.*** The bullock-carters received : — 34 gauṇi

LEAF XXXIV

1. For preparing polished stones to be fitted into the beki 13 workers with Yogī Mahāraṇā received : — 2 bharaṇa 17 gauṇi

2. Nārāyaṇa Mahāpātra, Vidyādhara Mahāpātra and Rāma Mahāpātra worked every day for 3 ghaḍi on the horses by the side of the pīṭha (1 ghaḍi=48 minutes). They received (Pl. 78, 79) : — 1 bharaṇa 24 gauṇi

3. 42 kārigars went home to reap their crops and received in settlement of all their dues : — 2 bharaṇa 40 gauṇi 10 māḍha

4. On the 3rd day of Mārgaśira excavation of the foundations for the Siddheśvarī Mahādevī temple**** was started on the lines marked out by the Sūtradhara. Forty workers received : (Pl. 99) — 2 bharaṇa

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* hiñjala=Barringtonia Acutangula.

** outside the compound, at the end of the Ratha Yātrā road.

*** Daṇḍapāṭa=circle of villages, sub-division.

**** According to the Mādaḷā Pāñji this temple was built on the order of the Rājamātā Kastūrikāmodinī.

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5. Victualling charges for the hātiāḷas :	40 gauṇi
6. 418 pathuriās and 10 Madurai kārigars, all together 428 people were called by the Sūtradhara to a meeting. (For the meeting) :	1 kuñcā oil
7. Following a letter from the Mahāśrama, on the 10th day of Tulā (Kārttika), some kārigars received for additional labour :	6 māḍha 40 gauṇi
8. The plan with measurements which was drawn up at the meeting for the distribution of work was sent to the Mahāśrama through a guard. Expenses :	10 gauṇi
9. Some eminent persons who had come to Puruṣottama for a darśana,* were, by the orders of the Mahāśrama sent with Balaśrī to see the temple construction. According to their status they received presents :	
(1) Nārāyaṇa Citrakāra Nāyaka of Puruṣottama :	1 māḍha
(2) Narasiṁha Mahāpātra from Bāhelibāḍa :	1 māḍha
(3) Dāmodara Paḍusi from Nuāgaḍa Pāṭaṇā :	3 māḍha
(4) Viṣṇu Paṭṭanāyaka from Narasiṁhagaḍa :	1 maḍha
(5) Rādhānātha Mahāraṇā from Varāhabhuin (Bankura) :	10 māḍha
(6) Sukhadeva Rāma, the brass-worker from Pahāḍpur (Bengal), who had come on horse-back and	each
(7) Mādhava Siṁha Mūrtikāra (image-maker) from Gayākṣetra :	20 māḍha
(8) To the Master of Narasiṁha Koṭā (Fort), the honour of Cāmarasevā (service of the flywhisk) of Puruṣottama temple	
(9) Chilla Satyanārāyaṇa from Kalahastīśvara kṣetra (near Tirupati) :	20 māḍha
(10) Geddu mūrtikāra from Kaliñjara kṣetra (South-India)	20 māḍha

* It is still a custom to-day, that people from all over India come to stay in Purī for the month of Kārttika,

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(11) Viśvaksenācārya from Nārāyaṇa Varada kṣetra (Karṇāṭa) : 20 māḍha

(12) The old Maheśvara Mūrtikāra of Puruṣottama kṣetra : 6 māḍha

On the 9th day of the bright fortnight of Kārttika these people returned home.

10. On the order of the Mahāśrama Ātmārāma Gochikāra (temple-guardian) was to show the temple construction to any person well-versed in Śilpa, who came to Puruṣottama for darśana.

11. A group of 38 people who had gone with the stone-expert Jagannātha Mahāpātra to the hill-quarries, returned and received : 4 bharaṇa 26 gauṇi 7 māḍha

LEAF XXXV

1. On Kārttika śukla ekādaśī a letter came from the Mahāśrama, saying that Balaśrī with 13 important people, including Viśvanātha Mahāpātra Sāndhivigrahika Rājaguru would come to see the temple construction. On receiving this news a party went to the Kuśabhadrā river to receive them. Expenses for the escort-party : 2 bharaṇa

2. The Paramavaiṣṇavī Sītā Devī Mahārāṇī, daughter of the King of Malva (second wife of Narasiṁha Deva) came along with the Rājaguru. Special quarters were prepared for her by 8 people, who received : 8 gauṇi

3. 37 kārigars who had gone to Nīlagiri with Jagannātha Mahāpātra had come back. The Rāṇī said : It is my wish, that some pathuriās from here should be sent to Remuṇādaṇḍapāṭa for making a temple to Kṣīracorā-Gopīnātha. This message was sent to Biḍānāsī Daṇḍapāṭa (to the Mahāśrama). The Rāṇī with her own hands gave to the pāik : 2 māḍha

4. Sītādevī Mahādevī put 700 small māḍha into the hands of the Sūtradhara. Out of these 401 māḍha were put into the Treasury by the Sūtradhara and the rest distributed (as gratuities) to the śilpīs.

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5. For making a Rāmacaṇḍī image of 5 pā* in muguni stone Gadādhara Mahāpātra received as per contract : 7 māḍha

6. The 137 pathuriās who, before the Kārttika Pūrṇimā of the 14th aṅka** had prepared and arranged on the ground the stones for the pīḍhas, received, after all calculations were made, in settlement of their dues : 708 māḍha

7. For a Nāṭāmbara image of 5 pāyā made by Gadādhara Mahāpātra : 3 māḍha

8. Thirteen (*sixteen, Ms. 2*) images of muguni stone*** were set up on the anurathas of the garbha śikhara in the presence of Balaśrī. On Mārgaśira Kṛṣṇa aṣṭamī Balaśrī presented to the sculptors of those beautiful images : 17 pairs silken cloths

9. The Mahāśrama Pratāpī Narasiṁha Deva had fought against the Nawab of Nakaura (Lakhnauti)**** and after defeating Tugaina Khan and having his palace ransacked by Bhogika Amṛta Daṇḍādhikārī Madana Sundara Deva, the spoils were brought to Kṛttivāsadaṇḍapāṭa, and from there on four elephants to the Padmakeśara Treasury, where they reached on Mārgaśira śukla ekādaśī of the Sāla year 662***** (1255 A. D.) in the middle of the night, when the Treasury was closed. Three pāiks kept guard. Dhārasiṁha received for each : 1 māḍha

   Minted gold-coins with curved inscriptions (baṅkālekhā māḍha=Mogul coins see No. 13) 6000 kurujātaka

   Small gold-coins weighing 8 rati (*Kulatuṅga gedi, Ms. 2*) : 37000

   Gold chains of 6 rings (or 6 strings) (kaḍāra) : 27 pieces

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* Both the images mentioned under No. 5 and 7 are most probably those now in the British Museum in London, belonging to a set made for the rathakas of the śikhara. Four such images are mentioned under No. 11, and four are in London; one five-headed Gaṇeśa, one dancing Śiva, one standing Sūrya and one Durgā fighting the buffalo Demon. Rāmacaṇḍī is another name for Durgā. See Pl. 32

** *14th aṅka in Ms. 2.*

*** Sixteen images may be 8 Dikpālas and 8 Dikpāla Patnīs placed in the upper jaṅgha of the garbha, see Text on Architecture, Leaf X, B, c.

**** *Nakhauti, Ms. 2.*

***** *Ms. 2. Sāla year 652 (1245 A. D.)*, see App. No. 13 and 17.
This whole entry appears to refer to the war the Rājā fought in Bengal in his 9th and 10th aṅka, taking his accession to have been before, Sept. 1238, and should therefore not figure in the context of the 14th aṅka.

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Turban ornaments with precious stones :	12 pieces
One golden staff with ornamented knob, weighing :	123 māḍha
One tiger-knife with a golden handle, inset with rubies and pearls, weighing :	18 māḍha
Silver bricks weighing :	327 viśā 3 paḷa

Out of these things those with rubies and pearls were sent to the Puruṣottama Treasury. Only the kurujātakas were kept in the Treasury of Padmakeśara.

10. For finishing the construction of the Naṭadeula pīṭha within one year, Gadādhara with 124 people was given a contract of 104 māḍha, of which he received : 40 māḍha

11. For fixing muguni stone images with karāḷa in the anurathas of the big temple, ten Dikpālas in the upper and ten Rājabandhas and four Deva-images* in the lower, Nidhi, Rāma, Guṇiā and others received : (Pl. 32, 33, 52, 53) 1 Māḍha 26 gamchās

12. For setting the (*sandstone, Ms. 2*) door-frames of the Lion-gate under the direction of Gadādhara Mahāpātra, Yogi Mahāraṇā received : 1 māḍha

13. The kurujātakas which had been brought, were to be smelted. For making 2431 kulatuṅga māḍha out of that gold, they were sent to Biḍanāsī Fort through the pāik Haru and the Treasury Officer (Bhaṇḍāranikāpa) : 1 māḍha

14. For tracing the foundations of the maṇḍapa Yogi Mahāraṇā received : 14 gauṇi

LEAF XXXVI

1. For digging the foundations of the horse-gate-temple :** 10 gauṇi
2. Salary for 7 Overseers : 30 gauṇi 45 māḍha

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* These latter images were called Keḷi bandha in the text on Architecture, Leaf XI B, b, c, and included various subjects : Brahmā, Gaṇeśa, Śiva, Nārāyaṇa, Caturaṅga, Śikṣādiśya and apparently also images of the Rājā in various activities.

** This simply means the southern gate temple, customarily called the horse-gate in Orissa. See note on L. XLI, 18.

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3. On the Śivarātri day Govinda Mahāpātra delivered to the Sūtradhara an image of Sūrya-Śiva (Sūrya standing, holding triśula, ḍamarū, and two padmas),* he received according to contract : 10 māḍha

4. To twelve workers, Nārāyaṇa Mahāpātra, Yogi Mahāpātra, Nidhi Mahāraṇā, etc. for setting two layers of stone on the beki in 7 days, expenses : 2 māḍha 34 gauṇi

5. For casting Vijaya pratimās (portable images) Kaṅsāri Nāyaka received : 5 māḍha

6. For finding out what was being talked at night in the camps of the śilpīs one man Pahali Paṭṭanāyaka has been appointed on the Mahāśrama's order. On his return from war the Mahāśrama ordered an image to be made of himself in the attitude of a triumphantly returning warrior. On a contract of 25 māḍha advance payment : 7 māḍha

7. The beki-stones became loose. For opening the stones (prior to resetting) 7 pathuriās worked for 12 days : 34 gauṇi

8. Gadādhara Mahāpātra with 12 people reconstructed the beki, and Nidhi Mahāpātra who had received 2 māḍha before for constructing the beki, returned the same to Gadādhara Mahāpātra.

9. To determine the position of the pedestal (garbha-piṇḍi) in the garbhagṛha, the Sūtradhara was helped by one man, who received for 2 days : 1 gauṇi

10. After finishing the carving on the pillars below the Navagraha stone, Giridhara Mahāpātra and others received, according to contract : 14 māḍha 2 gauṇi

11. The Madurai kārigars received : 10 māḍha

12. A four-armed image of Viriñci-Nārāyaṇa (Sūrya)** was delivered by Dāma Mahāpātra to Sūtradhara (he was given) : 4 māḍha

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* in the Koṇārka Museum, see Pl. 109.

** Seated image holding two lotuses, Veda-pustaka and kamaṇḍalu, combining features of Sūrya and of Brahmā, destined to crown the portal below the bāṅkapaṭi (arch).
A Sveta Viriñci image is mentioned on Leaf LXII, 8, which, however, is supposed to be six-armed.

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13. To 10 pathūrias, including Gadādhara Mahāpātra, Rāma Mahāraṇā, for working 18 days, chiselling the seven bandhas of the doorjambs (of the mukhaśālā) : 10 māḍha 3 bharaṇa

14. For making the small temple (gumuṭa) at the Lion-gate the Sūtradhara had appointed 24 people including Nidhi Mahāraṇā on a contract of 30 māḍha 11 bharaṇa. They received : (Pl. 109) 10 māḍha 3 bharaṇa

15. For working on the siṁhāsana (of the Pūjā-image) Rāma Mahāpātra, Madhu Mahāpātra, Viśvanātha Mahāpātra and 5 other pathuriās received : (Pl. 77) 15 māḍha

16. For working at the construction of the Ṭhākurāṇī temple 13 people received for 15 days : 72 bharaṇa

17. The secondary scaffoldings of the western Niśā-temple were dismantled, and with the same material a scaffolding for the Elephant-gateway* 14 hasta high was erected. 12 people received : 17 gauṇi

18. Water-supplier Samiyā : 24 gauṇi
Wages to 22 pāiks : 34 gauṇi

19. For buying phagu (coloured power) on the Dola (Phālguṇa) Pūrṇimā (Holi Festival) : 3 kāhāṇa kauri

LEAF XXXVII

1. To Banudāsa Bābāji of Naḍiā maṭha : 5 gauṇi

2. After constructing four layers of the beki, the stones again became dislocated, and the Sūtradhara ordered them to be fixed on both sides with cramps, (for which) Rāma Mahāraṇā received : 13 gauṇi

3. On the 14th day of Caitra work on the garbha was stopped and the śilpīs were put to sculpture work. Dāma Mahāraṇā, Narasiṁha Mahāpātra, Gopī Mahāpātra and 10 other persons were deputed to carve the elephants. Clearance to the workers on the garbha : (Pl. 80) 3 bharaṇa

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* The northern gate-temple.

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4. The work on one elephant was entrusted to Gopī under the direction of Gadādhara Mahāpātra, the other elephant was entrusted to Gaṅgā Mahāpātra, Head of the Pathuriā community (Pathuriā Pariaṅga Kuḷa Nāyaka). Thus the work on the elephants was divided between two teams.
5. Thirty-two workers who had laboured for two months, were sent home and received for the journey : 5 gauṇi
6. For supplying 62 polished stones for the khapuri of the mukhaśālā, the supplier received towards his balance : 12 gauṇi
7. Two persons (bhikari ?) for a day : 3 gauṇi
8. To make six bandha-mūrtis (love images) Rāma Mahāpātra, Nīla Mahāpātra, Gopī Mahāpātra and Gaṅgā Mahāpātra had jointly a contract of 5 māḍha (per mūrti) and received down payment : (Pl. 54, 55) 13 māḍha
9. At the position fixed by the Sūtradhara (*in front of the mukhaśālā, Ms. 2*) for the Aruṇa pillar a 5 hasta deep hole was dug. Labour-charges : 7 gauṇi
10. On the 9th day of Caitra Śukla 12 pathuriās and 72 pāiṭāḷas brought the Aruṇa pillar by sāṅgi from the place where it had been made and laid it down by the side of the excavation. The workers received : (Pl. 83) 23 gauṇi
11. To the śilpīs and the workers : 13 gamchās
    2 māḍha
12. Gadādhara sent the stones for the pedestal of the pillar in numbered order, six people brought them by sāṅgi, they received : 2 gauṇi
    balance : 2 māḍha
13. By the side of the excavation four wooden posts were erected. Labour charges : 2 gauṇi
    Bāsu Ojhā fitted three iron pulleys on a rod between the posts, he received : 2 gauṇi
14. Six heavy cables were tied around the pillar for raising it. Two elephants lifted the upper end of the pillar with their trunks, whereupon āśās were set underneath. Then three ropes were passed over three pulleys (sagaḍi) and were pulled from the other side by 35 people. Twelve people went on supporting the pillar with āśās from below. Elephants and pāiṭāḷas for three days : 2 gauṇi
    5 gauṇi

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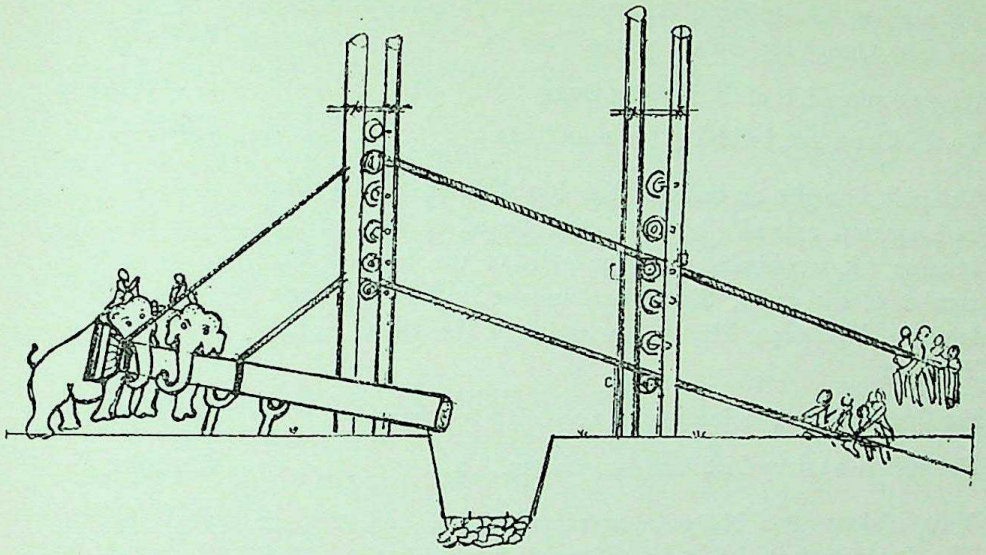

Setting the Aruṇa-pillar into the ground with the Kalagayaḷa, Leaf XXXVII, 14

15. After setting up the pillar and filling up (the hole) Gadādhara Mahāpātra and 4 other pathuriās fixed the stones of the pedestal around it. Four people received for 7 days : 14 gauṇi¼

16. Nārāyaṇa Mahāpātra who was in charge of setting up the horses (on the pīṭha), said to the Sūtradhara : Let us not put 4 and 3 horses on either side, but let one horse be in the centre. Sūtradhara said : no, it cannot be done like this, and a controversy arose between the two. Therefore Sūtradhara referred the matter in a letter to the Mahāśrama in Biḍānasī, (sent through a guard). For the pāik's journey : 7 gauṇi

17. For the work on the pedestal of the Aruṇa-pillar two trestles 3 hasta high and two trestless 2 hasta high had been made by the carpenter Bandhu Mahāraṇā, he received : 3 gauṇi

LEAF XXXVIII

1. Seeing those trestles some other śilpīs also demanded the same. Therefore order was given to the carpenter to make 2 hasta and 3 hasta high trestles of mango-wood to be delivered within twelve days, under contract of 25 gauṇi, advance : 1 gauṇi

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2. For making the image of Aruṇa according to the Dhyāna* Sāmanta Gaṅgā Mahāpātra received : 2 māḍha

3. Wages to the śilpīs of the Rupāsa Camp : 134 māḍha
   To the Overseers, including Bhramarabara : 3 māḍha

4. The pāik brought an order of the Mahāśrama, saying that no harnessed animal (horse) should be put in the middle because (it would obstruct) the yātrā of the image. On receipt of this order, Sūtradhara imposed a fine of 2 paṇa kauri on Nārāyaṇa Mahāpātra and sent the kauris to the Treasury.

5. For fine work on the doorjambs, according to contract : 10 māḍha

6. Sūtradhara's salary for 3 months (khaṭaṇī) : 6 māḍha

7. Viśu Mahāraṇā of Nuāgaḍa was immobilized by sickness. The Overseer sent him to his village in a bullock-cart. The carter Rāma Padhāna took the bullock-cart. To Viśu Mahārāṇa in clearance of his work, plus some gratuity : 10 māḍha

8. The accounts of the seven śilpīs who had made the anurathas of the garbha were checked, and in final settlement they received : 23 māḍha

9. An order from the Mahāśrama was brought from Veṅgigaḍa via Biḍānāsī by a man on horse-back. He received for coming and going : 44 gauṇi 2 sikā

10. Since, according to the letter, the Mahādevī would be coming for a few days, a room was built in seven days by 14 persons who received : 7 gauṇi

11. On Akṣaya Tritīyā (3rd day of Śukla Vaiśākha) three bullock-carts arrived with some luggage and a letter from the Mahaśrama. They brought :
    a dismountable bedstead (khañjā palaṅk)
    4 sealed wooden boxes
    1 box with 13 sets of vessels.

12. For looking after the cows Rāma Mahābhoi (cowherd) received : 3 māḍha

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* Image made for crowning the pillar in front of the mukhaśālā. For Dhyāna of Aruṇa see App. No 20.

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13. Twelve kārigars, including Gaṅgā Mahāpātra, Nārāyaṇa Mahāpātra and Madhu Mahāpātra were under a contract of 120 māḍha for making four cirāsiṁhas and were paid advance : 40 māḍha

They also received for four kanyā-mūrtis : 40 māḍha

14. Gaṅgā Mahāpātra had made three bandha-mūrtis for the anuratha of the mukhaśālā. To bring them eighteen sāṅgi-workers received for 2 days : 7 gauṇi

LEAF XXXIX

1. For work on the front-horses Nārāyaṇa Mahāpātra received : 30 māḍha

2. Of the 47 people working on the garbha who had left for their villages*, all except five returned to the Duāi camp and received for victualling : 1 bharaṇa 10 gauṇi

3. For carving the lotus-petal pattern on the pīṭha of the Nāṭa (mandira) Jayā Mahāraṇā and five others received :** 2 bharaṇa 3 gauṇi

4. To receive the Mahāśrama a party from the Duāi camp went out : 20 gauṇi

5. For the Mahāśrama's stay twelve attendants of good caste were appointed and received for their daily services : 4 māḍha 12 gauṇi

6. The Mahāśrama was taken round in a palanquin. Fourteen persons, including the Sūtradhara, Nārāyaṇa Mahāpātra, Bāsu Ojhā escorted him to show him every work. To the bearers (gauḍas) who carried the open palanquin (mehenā) : 7 gauṇi

7. On the 26th day of Vaiśākha the Daḷabeherā of Gaḍa-Rupāsa with all the śilpīs prostrated before the Mahāśrama and offered some presents :
Kauris : 16 kāhāṇa 3 paṇa

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* When work was stopped on the garbha, see Leaf XXXVII, 3.

** Two leaves of this Baya Cakaḍā were recently retrieved in the Archives of the Jagannātha Temple. They belong to another copy of this text, because one covers the items of our text from Leaf XXXIX, 3 to half XXXIX, 7, and the other the items from Leaf XII, 21 to Leaf XIII, 2.
In this copy the Mahārājā is called by his ancient titles of Paramasaura, Puruṣottama Rakṣita, Sapuccha Mahāśrama Nārsiṁha Deva, just as at the beginning of the Karmāṅgi text.

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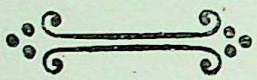
Minted silver-coins :	60
Vegetables :	7 baskets
Dahi :	3 pots
Wooden sandals with carvings :	1 pair
Muguni stone vessels	1 set

One sword made by Bāsu Ojhā with this symbol :



One ivory stick and 1 māḍha Sūrya marked presented by the Sūtradhara.

8. The Mahāśrama made the following declaration :

"Now nine years have passed and you have all spent so much labour (over this building), but still the beki is not finished. By the 10th day of the 10th month of the 10th year the garbha muda (roof) should be completed.* This time-limit should not be over-stepped. About other works I do not wish to say anything."

To make this royal order known a drummer Bāsu with a deṅgurā (small drum) was sent to all the camps and received : 3 gauṇi

9. Gaṅgā Mahāpātra had started carving an elephant of 3 hasta 7 aṅguli height. But the Mahāśrama ordered that it should not be like this, but should be of the size of his own small elephant (guṇṭhuli hāti) Sudehikā.** The half-cut stones were removed by 3 pathuriās and 5 carriers received : 10 gauṇi

10. Dharaṇī Mahāpātra and eight pathuriās for making one Kautuka-bandha mūrti (lion with a human head) and seven virāḷas received : (Pl. 14, 15) 40 māḍha

LEAF XL

1. For rapairing and reroofing the sheds of the sculptors and of the workmen for the rainy season : 2 kāhāṇa kauri 10 paṇa

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* Reference to the normal time of pregnancy (lunar months).

** See note of Mādaḷā Pāñji in Appendix No. 16.

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2. For making the khapuri (on the āmalaka) of the mukhaśālā 62 stones prepared in dovetailed pairs (jāunḷi-dokhaṇḍiā) were ready, and were carried on the scaffolding by 12 people in 3 days : 24 gauṇi
3. To five hātiāḷas : 1 bharaṇa
4. For finishing the uppermost pīḍha with line-work (rekhākarma) : 10 māḍha
5. The Mahāśrama went one night to the place of the Sūtradhara to see the pūjā-image. To ten people of the Royal escort : torch-bearers (paṭuāri), umbrella-bearers (cāmara), etc. who accompanied him : 4 gauṇi
6. A dvādaśa āvaraṇa Mahāsūrya Yantra* was drawn with red sandal-paste on a metal-plate 2 hasta square to be placed underneath the siṁhāsana by Bhuvaneśvara Rājaguru, Ānanda Ratha and Nidhi Ratha of Vedapura. They received : 2 māḍha
7. Kāśī Ojhā, seated on the Mahāśrama's camp verandah engraved the yantra and received : 1 māḍha
The Mahāśrama on his own gave him a pair of silken cloths.
8. After the Snāna-Pūrṇimā (Jyeṣṭha Pūrṇimā) the Baḍu Mahāpātra came form the Puruṣottama temple and brought some prasāda for the Mahāśrama.**
9. On Jyeṣṭha śukla ṣaṣṭhī 23 pathuriās were given a contract of 40 māḍha by the Sūtradhara for building up the raṅgapīṭha (Nāṭamandira, probably its upper part) according to the suggestions of Sadānanda Gupta.***
They received : (Pl. 91) 18 māḍha

LEAF XLI

1. On the Pūrṇimā day of Siṁha, before lifting the Beki-Bhairavas into the scaffolding (of the garbha) pūjās were performed on the ground on all four sides of the temple. For this was given to the Vedapura Mahājanas : 4 kuñcā ghee
1 māḍha

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* See the Sūrya-yantra according to Maṇḍalasarvasva in Appendix No. 5.

** This is a practice (vidhi) of the Puruṣottama temple, that on this day, prasāda of the temple should be sent to the Rājā, wherever he may be.

*** Probably this was the dance-master (Nāṭyācārya) represented on the plinth with an inscription : SOMĀGUPTAI because this Maṇḍapa was also destined to the performance of temple-dancers. In Ms. 2 it is Somadagupta.

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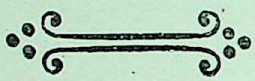
Minted silver-coins :	60
Vegetables :	7 baskets
Dahi :	3 pots
Wooden sandals with carvings :	1 pair
Muguni stone vessels	1 set

One sword made by Bāsu Ojhā with this symbol :



One ivory stick and 1 māḍha Sūrya marked presented by the Sūtradhara.

8. The Mahāśrama made the following declaration :
"Now nine years have passed and you have all spent so much labour (over this building), but still the beki is not finished. By the 10th day of the 10th month of the 10th year the garbha muda (roof) should be completed.* This time-limit should not be over-stepped. About other works I do not wish to say anything."

To make this royal order known a drummer Bāsu with a deṅgurā (small drum) was sent to all the camps and received : 3 gauṇi

9. Gaṅgā Mahāpātra had started carving an elephant of 3 hasta 7 aṅguli height. But the Mahāśrama ordered that it should not be like this, but should be of the size of his own small elephant (guṇṭhuli hāti) Sudehikā.** The half-cut stones were removed by 3 pathuriās and 5 carriers received : 10 gauṇi

10. Dharaṇī Mahāpātra and eight pathuriās for making one Kautuka-bandha mūrti (lion with a human head) and seven virāḷas received : (Pl. 14, 15) 40 māḍha

LEAF XL

1. For rapairing and reroofing the sheds of the sculptors and of the workmen for the rainy season : 2 kāhāṇa kauri
10 paṇa

---

* Reference to the normal time of pregnancy (lunar months).

** See note of Māḍaḷā Pāñji in Appendix No. 16.

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2. For making the khapuri (on the āmalaka) of the mukhaśālā 62 stones prepared in dovetailed pairs (jāunḷi-dokhaṇḍiā) were ready, and were carried on the scaffolding by 12 people in 3 days : 24 gauṇi
3. To five hātiāḷas : 1 bharaṇa
4. For finishing the uppermost pīḍha with line-work (rekhākarma) : 10 māḍha
5. The Mahāśrama went one night to the place of the Sūtradhara to see the pūjā-image. To ten people of the Royal escort : torch-bearers (paṭuāri), umbrella-bearers (cāmara), etc. who accompanied him : 4 gauṇi
6. A dvādaśa āvaraṇa Mahāsūrya Yantra* was drawn with red sandal-paste on a metal-plate 2 hasta square to be placed underneath the siṁhāsana by Bhuvaneśvara Rājaguru, Ānanda Ratha and Nidhi Ratha of Vedapura. They received : 2 māḍha
7. Kāśī Ojhā, seated on the Mahāśrama's camp verandah engraved the yantra and received : 1 māḍha
   The Mahāśrama on his own gave him a pair of silken cloths.
8. After the Snāna-Pūrṇimā (Jyeṣṭha Pūrṇimā) the Baḍu Mahāpātra came form the Puruṣottama temple and brought some prasāda for the Mahāśrama.**
9. On Jyeṣṭha śukla ṣaṣṭhī 23 pathuriās were given a contract of 40 māḍha by the Sūtradhara for building up the raṅgapīṭha (Nāṭamandira, probably its upper part) according to the suggestions of Sadānanda Gupta.***
   They received : (Pl. 91) 18 māḍha

LEAF XLI

1. On the Pūrṇimā day of Siṁha, before lifting the Beki-Bhairavas into the scaffolding (of the garbha) pūjās were performed on the ground on all four sides of the temple.
   For this was given to the Vedapura Mahājanas : 4 kuñcā ghee
   1 māḍha

---

* See the Sūrya-yantra according to Maṇḍalasarvasva in Appendix No. 5.

** This is a practice (vidhi) of the Puruṣottama temple, that on this day, prasāda of the temple should be sent to the Rājā, wherever he may be.

*** Probably this was the dance-master (Nāṭyācārya) represented on the plinth with an inscription : SOMĀGUPTAI because this Maṇḍapa was also destined to the performance of temple-dancers. In Ms. 2 it is Somadagupta.

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2. Bāsu Ojhā fitted sagaḍis on the scaffolding (to be pulled) upto the beki and received : 13 māḍha

3. The four muṇḍei siṁhas were lifted up by uṭhāḷi-fāsa into the scaffolding, where 23 people fixed them on the sagaḍi and pulled them up, while 48 people pushed them from behind along the slopes of the scaffolding up to the beki.

4. A three-tier horizontal scaffolding resting on the siṁhas were erected at the beki (for constructing the āmalaka) : 10 māḍha

5. 103 people worked for 12 days and received : 2 bharaṇa
For pulling up (the siṁhas and Bhairavas) along the 4 hasta wide scaffolding 103 people received : 13 gauṇi
The operations lasted for 18 days (*12 days, Ms. 2*).

6. The Rupāsa camp was closed down and temporary sheds were made for the śilpīs on the southern side under the Arkavaṭa.

7. For having made the muṇḍei-siṁhas Nārāyaṇa Mahāpātra and other 10 people received : 14 māḍha

8. For fine chisel work on the siṁhāsana Gaṅgā Mahāpātra received : 13 māḍha
and Kunā : 10 māḍha

9. On Kanyā śukla daśamī the fine chisel-work on the siṁhāsana was finished by Gaṅgā Mahāpātra, who then washed it and covered it with a coarse white cloth of 10 hasta. After that he closed the door to the shrine.
For the cloth : 10 kāhāṇa kauri

10. For a cloth to cover the Pūjā-image : 3 kāhāṇa kauri

11. For polishing the floor of the mukhaśālā and the garbha with regaḍā stone and brushes of coconut fibre, 33 women laboured for 8 days and received : 24 gauṇi paddy

12. For planing (chisel-dressing) the uppermost pīḍha (muda-pīḍha) of the mukhaśālā 11 workers received : 1 bharaṇa
12 gauṇi

13. For making eight small bajantarī-kanyās of 3 hasta height Gayā Mahā (raṇā) and 10 other persons received : 12 māḍha

14. For lifting the four pieces of the khapuri by a 4 hasta long sagaḍi onto the scaffolding above the beki, 88 people worked for 10 days and received : 3 māḍha

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15. For work done on the rāhā upto the viṣama 83 people received : 3 bharaṇa

16. On Kārttika Kṛṣṇa trayodaśī in the 17th* aṅka the lotus-shaped khapuri of 8 sectors was set on the muda-pathara (*muṇḍa-pathara, Ms. 2*) 3 gauṇi

17. Suāsa Malla Vīravara Bāsubalendra Narendra came to inspect the work. Expenses for his stay : 3 māḍha

18. In the presence of Suāsa Malla the two horses, which had been made, were brought by sagaḍi and sāṅgi to the southern side and set up on the pīṭha 5 hasta high.** 32 carriers received : (Pl. 81-82) 7 māḍha
2 bharaṇa
18 gauṇi

19. For making two sandstone images of Yamunā and Gaṅgā for the Ṭhākurāṇī temple Nārāyaṇa Mahāpātra received : 7 māḍha

20. Gaṅgā Mahāpātra made an image of Brahmagāyatrī*** (for the garbhagṛha) and a Sūrya image for the southern niche. He received : (Pl. 99) 34 māḍha
1 pair silk cloth

21. In the 15th aṅka,**** on Pauṣa Pūrṇimā, Nārāyaṇa Mahāpātra set up an image of the Puṣya-abhiṣeka ceremony of the Rājā on the (anuratha of the) mukhaśālā.***** He received : 3 māḍha

22. When ornamental work was started on the third pīḍha of the mukhaśālā, the Sūtradhara suddenly fell ill and Madhu Mahāraṇā fell from the southern Niśā-temple. Thereupon the Sūtradhara gave order that this work should be abandoned and the scaffolding concerned dismantled.****** The pāik Chaḍa Siṁha announced this order in all the camps : 10 gauṇi

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* *15th aṅka, Ms. 2.*

** *Ms. 2. says : three hasta high,* which however is not likely. According to the use in Orissan temples; they would have stood on top of the southern stairs, looking outwards, and not looking towards the temple, as they do now. The same rule would apply also to the big elephants. See Pl. No. 6.

*** See Dhyāna of Brahmāgāyatrī in the chapter on the Mahāgāyatrī temple.

**** *15th aṅka, Ms. 2.*

*****Puṣya–abhiṣeka, the annual coronation celebration of the Rājā.

******It is a rule, that whenever a new work is started on the temple, whether big or small, the Sūtradhara has first to put his hand to it.

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23. Sūtradhara, unwilling to continue the work on the pīḍha himself, asked Gaṅgā Mahāpātra to do it. But he also refused, whereupon the whole scaffolding for the seated work (basā-cāra) was removed. 40 pāiṭāḷas dismantled it in 12 days and received : 1 bharaṇa 8 gauṇi

LEAF XLII

1. Rāma Mahāraṇā and Bāuri Mahāraṇā had gone with pathuriās to the Jagadaḷapura Hills to quarry chiṭasāhāṇa (sandstone). When the cāpas with 372 stones came to the canal, the Mahāśrama went upto there in a palanquin with 40 pathuriās. To the palanquin-bearers : 4 gauṇi

2. After verifying the accounts of the stone-quarrymen Bāuri Mahāraṇā received : 30 māḍha 1 bharaṇa 10 gauṇi

3. 173 workers carried the stones from the cāpas to the scaffoldings and received : 5 gauṇi

4. On the 1st day of Kakaḍā 44 pathuriās went away to their homes. They received : 20 māḍha 23 māḍha

5. To make the kalaśa with the baiṭhi (pedestal) for the mukhaśālā Bāṅgara (dwarf), Rāma Mahāpātra and 7 pathuriās received : 7 māḍha

6. The Mahāśrama went back to Puruṣottama for the ceremonial sweeping of the chariot for the Ratha-Yātrā= (cherāpahanrā) on Āṣāḍha śukla dvitīyā.
   Expenses for the Journey : 8 kāhāṇa kauri
   Fooding charges : 13 gauṇi
   To the attendants of the Mahāśrama : 24 gauṇi

7. For making Virāḷa-siṁhas seven people including Yogī Mahāpātra, Rāma Mahāpātra and Raghu Mahāraṇā received : 14 māḍha

8. For making the horses Nārāyaṇa Mahāpātra received another instalment of : 3 māḍha

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9. Viśvanātha Mahāpātra for finishing the (āḷapana) image* of the Mahāśrama (on the simhāsana), with other 3 specialists in fine chisel-work, received : (Pl. 76) — 7 māḍha

   To the Chief Overseer : — 7 māḍha

10. By way of the Mahānadī 1200 small chiṭakuṇḍā (spotted) sand-stones came from Bāṇeśvara (Nāsī) Hill. 33 people carried the stones and received : — 20 gauṇi

11. On returning from Puruṣottama the elephants were engaged to remove the sand-hills around the temple, mainly the large one on the southern side. The hātiāḷas received : — 3 gauṇi

12. For preparing a bālu-khāḷoi (sand-plough), ten wooden planks, 10 hasta long and 4 iron rods were taken from the store-room, the carpenter received : — 4 gauṇi

13. For work on the pedestal of the Aruṇa-stambha 10 workers received for 7 days : — 27 gauṇi

14. For setting the khāḷoi, a groove of two hasta was dug across the sand, three people worked one day : — 1 gauṇi

LEAF XLIII

1. After setting the khāḷoi, two ropes were fixed to its upper and lower corners, and each one controlled by three people from behind.

   For 10 days' work : — 6 gauṇi

   When the southern sand-hill was removed, Kāśī Ojhā received for guiding the operations : — 1 māḍha 10 gauṇi

   For fixing the ropes of 30 hasta to the rings attached to the (belts of the) elephants, the hātiāḷas received : — 3 gauṇi

2. For carrying stones from the cāpas during 16 days, 12 people received : — 1 bharaṇa 40 māḍha

3. To the stone-cutters of Tāpaṅga, wages :

4. For the New-Year (Sunyā) celebrations Viśvanātha Mahāpātra presented an image representing a Royal procession. He received : — 1 māḍha

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* In the Āḷapana ritual the Rāja is given the garland that was consecrated by having first decorated the Pūjā-image.

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5. For the construction of the Padmakeśara temple māḍha coins marked with a Sūrya-image had been issued. On this New-Year they were withdrawn. On the Rājā's order the Chief Accountant (bayakaraṇa) took 1058 large māḍha and 214 small māḍha coins and returned them to the Royal Treasury in Puruṣottama. For the guards : 24 gauṇi

   Expenses for the journey : 14 gauṇi

6. The Sūrya-marked māḍha coins were 4 to a tolā of gold. The Mahāśrama ordered that the new Padma-marked coins should be 5 to a tolā gold. For thus converting the coins from the (temple) deposit the minter (phaudāra) of the Mahāśrama's personal Treasury received as minting charges :* 12 māḍha

7. Two guards (accompanying the new coins) came from Puruṣottama, they received : 12 gauṇi

8. On the fifth day of Āśvina the Mahāśrama came with an escort party. The attendants received : 12 gauṇi

9. Salary of 230 śilpīs of the Rupāsa camp : 460 māḍha (lotus-marked)

10. On the 10th day of Kanyā (Āśvina) śukla (Daśaharā) for setting up the kalaśa** of the mukhaśālā, the Sūtradhara received : 1 pair cloths

    The Rājaguru received : 1 pair cloths

    The Brāhmaṇas of Vedapura received : 1 pair cloths and 24 gauṇi

11. For bringing up the kalaśa of two parts, 12 people with sāṅgi received : 6 gauṇi

LEAF XLIV

1. In the cavity between the two parts of the black muguni kalaśa, the Sūtradhara, while reciting the respective mantras, put the following things :

   1 gauṇi paddy

   1 gauṇi biri

   some dahi

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* Both these coinages, the Sūrya māḍha and the Padma māḍha had most probably been minted for commemorating the erection of the Padmakeśara temple.

** See App. No. 9.

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9 precious stones (navaratna) for the 9 planets
11 golden discs for the Ādityas (minus Mahā-bhāskara)*

Then he joined the two halves together and tied the whole into a red silken cloth. A guard stood watch over it. For setting the kalaśa Rāma Mahāpātra kārigar received : 4 lotus māḍha

2. For making the large āmalaka (of the garbha) in 16 pieces, Nārāyaṇa Mahāpātra and 14 pathuriās received :** 10 lotus māḍha

3. For carrying up the 16 pieces of the āmalaka by the eastern scaffolding of the garbha, 27 people worked 3 days and received : 38 gauṇi

4. Gaṅgā Mahāpātra, Gadādhara Mahāpātra and Sūtradhara worked three days on the beki to set up the āmalaka. 12 pāiṭāḷas helped them and received : 7 gauṇi

5. On each piece (joint) Bāsu Ojhā and Kāśī Ojhā fixed cramps, they received : 1 lotus māḍha
The cramps were tempered in water and in cuā (oil from sal-resin), one woman worker : 2 gauṇi

6. For working on the door-jambs, Nārāyaṇa Mahāpātra, Gaṅgā Mahāpātra, Sunā Pathuriāṇī and 3 others received one instalment of : (Pl. 58–59) 10 māḍha

7. For making garbha-siṁhas (on the beki of the śikhara) clearance of accounts was settled : 12 māḍha

8. Four corner-lions were carried up on the scaffolding of the garbha (mukhaśālā) by 40 people in 3 days. For their labour : 2 bharaṇa 17 gauṇi

9. Tightening the ropes of the scaffolding : 2 gauṇi

10. Two layers of 4 polished stone-pieces of 1 hasta height to be placed above the aḷāśrī (as khapuri) were carried up by 10 people in two days : 10 gauṇi
Gaṅgā Mahāpātra, Nārāyaṇa Mahāpātra and Gadā (dhara) Mahāpātra for setting the stones : 3 māḍha

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* The Sūrya-Tantra, ch. III, sl. 29 says : As Bhāskara in the pīṭha, thus Ravi should be worshipped in the Mukhaśālā, and in sl. 27 : In the centre Bhāskara should be worshipped. The other eleven aspects of Sūrya are gaṇadevatās (secondary devatās). Therefore Bhāskara cannot figure as a gaṇadevatā and be worshipped in the mukhaśālā.

** See App. No. 7.

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11. Then three pathūriās, two workmen with one water-carrier filled its joints with karāḷa and rubbed them with stone-powder, until it became as if made of one single stone. They received : 2 gauṇi

12. From the beki of the main temple to the top of the mukhaśālā a rope was stretched by Somanātha Cunurā : 1 gauṇi

13. On the last Thursday of Mārgaśira the lotus-emblem with the stalk (padma-daṇḍa) to be inserted into the channel made in the middle of the Ratna-muda-kalaśa, was brought to the Rājaguru.*

LEAF XLV

1. From the great temple of Puruṣottama Pati Mahāpātra brought prasāda (consecrated sweets) and put it into the kalaśa, he received : 1 māḍha

2. Now that the kalaśa had been set up, the Rājaguru received : 1 pair cloths

Nārāyaṇa Mahāpātra received : 1 pair cloths

Sūtradhara received : 1 pair cloths

Gaṅgā Mahāpātra received : 1 pair cloths

Gadādhara Mahāpātra received : 1 pair cloths

After pūjā had been performed on it, the Vedapura Brāhmaṇas received (each) : 1 pair cloths

Dakṣiṇā : 2 māḍha

3. The half-opended lotus-flower with a stalk of 3 hasta made of blue muguni stone was carried by four pathuriās in parikramā (circumambulation) around the temple and was taken up to the kalaśa of the mukhaśālā. For this they received : 4 pair cloths
4 gamchās
6 gauṇi

4. For the Homa-ceremony : 1 māṇikā ghee

For giving the pañcāmṛta** : 3 paṇa kauri
2 gauṇi paddy
100 coconuts

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* See App. No. 10.

** Pañcāmṛta consists of milk, dahi, ghee, honey and sugar.

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5. The śilpīs took the stone-lotus (dhvaja-padma) on top of the kalaśa. The Rājaguru spread a small cloth over it and saluted it (made namaskāra). Then Gadā (dhara) Mahāpātra set the stone. Bhuvani Rājaguru bathed the lotus in pañcāmṛta. While he was reciting the mantras, the kārigars were standing ready with 100 coconuts. Gaṅgā Mahāpātra broke the first one over it. After him every śilpī broke one coconut. For coconuts : 2 māḍha
For Dakṣiṇā : 2 māḍha
After this the śilpīs saluted (the kalaśa and the padma) and each took a piece of the scaffolding of the mukhaśālā (as a memento).
To celebrate this event they were given : 8 gauṇi

6. For making the simhāsana Gadādhara Mahāpātra and Viśvanātha Mahāpātra had a contract of 24 māḍha, they received : 10 māḍha

7. Rāma Mahāpātra, Bāsu Mahāpātra, Nidhirāma Mahāpātra, Yogī Mahāpātra, etc., 12 pathuriās in all, for making the doorjambs of the garbha (Kaḷāghāṭa dvāra)* received : 40 māḍha

8. For bringing the carved stones lying in the compound for the doorjambs : 24 gauṇi

9. To dismantle all the horizontal planks of the mukhaśālā scaffolding 26 people worked 12 days : 4 bharaṇa
28 gauṇi

10. For completing the berm (pahaṇḍa) ten pathuriās with Dāma Mahāpātra received : 10 māḍha

11. On the 7th day of Pauṣa Kṛṣṇa pakṣa Nārāyaṇa Mahāpātra finished setting up the seven horses and received : 30 māḍha
Nārāyaṇa Mahāpātra received again : 10 māḍha

12. Twelve śilpīs including Vīra Mahāpātra, and Gaṅgā Mahāpātra for carving the 1½ hasta high Navagraha panel for the southern, and having completed the Navagraha panel for the northern portal of the mukhaśālā received : 10 māḍha

13. On the 4th day of Pauṣa śukla pakṣa 40 persons including Vīra Mahāpātra, Kṣetravāsī Mahāraṇā received a contract of 100 māḍha for laying the floor of the mukhaśālā with dressed stone flags from the eastern doorway upto the garbha within three months. Advance payment : 40 māḍha

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* Kaḷāghāṭa is derived from kaḷā, one of the 16 kalās (parts) of Sūrya and ghāṭa, which means doorway. Thus kaḷāghāṭa is the doorway leading to the integral Sūrya of 16 kaḷās.

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14. The Sūtradhara : 6 māḍha
Eleven overseers : 45 māḍha
230 śilpīs received : 40 māḍha plus paddy
246 workmen : 3 bharaṇa 4 gauṇi

15. For sharpening chisels : 12 gauṇi

16. To the priest serving the Gaṅgeśvarī temple : 1 bharaṇa

17. To the Bābājī of the Maṭha : 5 gauṇi

18. To lay the floor of the garbha with muguni stone-slabs, while leaving a place for the siṁhāsana and to make the nandāvartas (round door-steps) 45 workers had laboured 25 days : 3 bharaṇa 10 gauṇi

LEAF XLVI

1. On the 13th day of Māgha kṛṣṇa pakṣa the Sūtradhara in consultation with the Rājaguru directed the levelling of the mukhāśālā floor, by indicating the slope through fixed threads : 1 lotus māḍha

2. The ordinary stone-hewers (swāṅsyā kārigar), on their return from the South, received as per earlier understanding : 2 māḍha 24 gauṇi

3. For finishing the wall-portion of the eastern Gate-temple (gumuṭa) to 12 kārigars for 3 months : 14 māḍha

4. Kāśī Ojhā, Bāsu Ojhā and seven other black-smiths received: 3 māḍha 24 gauṇi

5. Rāma Mahāpātra, Gadādhara Mahāpātra were given seven muguni stones for making a hollow kalaśa for the garbha, on a contract of 25 māḍha, they received : 10 māḍha

LEAF XLVII

1. For having kept guard over the stones, counted and arranged on the ground for the part of the temple from the beki to the khapuri the pāik Hari Siṁha received : 12 gauṇi
An annuity (baraṣiā) of : 1 māḍha

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2. 340 young pathuriās and 273 young pāiṭāḷas who had gone to war with the Mahāśrama and together with work on construction had served for 12 years, made a request to be released. The Mahāśrama sent for each one a small farewell gift from his personal Treasury wrapped in cloth. From our Treasury they received in clearance of accounts and for their journey :

1034 small māḍha
3 bharaṇa
1 bharaṇa muṅg

What was contained in the parcels I do not know.

3. For making the anuratha śikharas of the main temple and arranging the stones on the ground, according to previous contract, Gadādhara Mahāpātra and twenty other pathuriās received in settlement of their dues : 130 māḍha

4. On the day of the birth of the crown-prince (jenāmaṇi) to the Mahāśrama some presents arrived for the śilpīs. The person who brought the presents and arranged for their distribution in the camps, was given : 3 gauṇi

5. (*The śilpīs made a feast, Ms. 2*). The cooks Naru Paṇḍā, and Biśi Paṇḍā worked six days with ten other people helping them with cooking and serving. They received from the Community Fund of the śilpīs respectively :

10 māḍha
3 māḍha

6. For making four Beki-Bhairava images Gaṅgā Mahāpātra's team of 11 people received in clearance : 30 māḍha

7. For making a large image (*of Sūrya Ms. 2*) in muguni stone* 4 hasta 8 aṅguli high for the middle of the (first) pīḍha-bharaṭi (wall), 13 people with Gadādhara Mahāpātra received : 70 māḍha

8. For placing an image on the back pahaṇḍa in front of the Niśā-temple Gadā (dhara) Mahāpātra received : 1 māḍha

9. Rādhu Paṭṭanāyaka supplied 11 coils of ropes from South Orissa and received : 7 māḍha

The buffalo-carter received for his return : 37 gauṇi
3 pairs gāmchās

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* This is most likely the life-size Sūrya image in muguni stone now in the National Museum in New Delhi.

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10. On the 10th day of Vaiśākha śukla pakṣa a lion should have been set up on the rāhā, but because Gaṅgā Mahāpātra had not returned from his village, a bullock-cart was sent for him. The carter received : 5 gauṇi

11. For making images of two large fiend-destroying horses in the likeness of the Mahāśrama's two battle-horses, one black and one white, in their battle-harness and with their riders, which work had been assigned to them by the Sūtradhara, Dharma Mahāpātra and Choṭa Śiva Mahāpātra (with a lame leg) received in all : (Pl. 81, 82) 100 lotus māḍha

12. The overseers received : 11 māḍha
Wages of the Rupāsa camp : 230 māḍha
Wages of the Laṅkapaḍā camp : 170 māḍha
18 bharaṇa paddy

13. For making two big rampant lions in front of the portal (of mukhaśālā ?) Gadādhara (Mahā) pātra's team of 12 pathuriās received : 13 māḍha
Nārāyaṇa Mahāpātra : 7 māḍha
Gaṅgā Mahāpātra's team of 13 people : (Pl. 97, 98) 14 māḍha

14. Rāma Mahāpātra and Gadā Mahāpātra who had made the dadhinauti (lower part of the kalaśa) with a channel and the cavity for the jewels, brought it to the Sūtradhara's camp and returned 3 muguni stones. They received : 16 māḍha

15. For the very skilful contrivances made for hauling up the two parts of the big Rāhāsiṁha (dikhaṇḍiā baḍa Rāhāsiṁha) Bāsu Ojhā received : 3 māḍha

16. Rāṇī Kastūrikāmodinī Devī would have liked the whole kalaśa* to be made of gold, but when the śilpīs objected, the Mahāśrama ordered, that only the rubies on the lotus emblem (khiḷa-padma) should be set in gold. The pāik Dhara Siṁha called the chief royal goldsmith from Puruṣottama and received : 10 gauṇi

17. For having lifted 32 āmalakī stones in pairs (diphāḷiā=two layers) with ropes hung from the gayaḷa on the Niśā-temples through the scaffolding, 130 workmen received :** 70 māḍha

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* This may be a misreading for padma-dhvaja or khiḷa-padma (lotus emblem).

** See App. No. 7, on construction of āmalakas.

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18. For setting up (kalaśas) of muguni stone of 1 hasta without stem for the emblem on the Niśā-temples Rāma Mahāraṇā and Dayā Buḍhā received : 7 māḍha

19. For placing images at the beki* the jāli-cutters Nidhi and Yogī with others received : 7 māḍha

20. The Sūtradhara had ordered an image of the Suāsamalla fighting on horse-back to be made. For setting it up the workmen laboured 7 days and received (Pl. 19) : 3 māḍha

21. The work of cutting stones to size was now terminated, therefore some pathuriās went to the camp of the Sūtradhara for darśana and received from the Treasury in settlement of their dues : 314 māḍha

22. Some of them went to work on the Puruṣottama Rathas (*Ms. 2*)

LEAF XLVIII (Ms. 2)

1. When they returned from the Ratha they received : 4 māḍha

2. From (Bāṇeśvara) Nāsī the cāpuā-(daḷāi) brought 3 regaḍāsāhāṇa (rough sandstones) of 8 hasta (?) he received : 1 pair of cloths

3. Twelve chiṭakuṇḍā stones of 14 hasta (?) for the Āḷasī statues came through the Malāguṇi, Dayā and Sola rivers and were given to Gaṅgā Mahāraṇā and his team. He received advance : 14 māḍha

4. Golara Dalabeherā with 1260 people made temporary sheds free of charge, for their victualling : 38 bharaṇa paddy

5. For bringing kuṇḍā pāṭa (stone-slabs) from Kerāṇḍimāḷa and Āsikā the boat-charges were : 230 māḍha

6. For digging out from the Kāduāmaṅgaḷa canal stones which had dropped into it and for repairing the canal the cāpadaḷāi Dharmu Teleṅgā received : 80 māḍha

7. To the people removing the sand : 2 bharaṇa 13 gauṇi

8. For mats destined to the temporary sheds the workmen received : 3 bharaṇa 10 gauṇi

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* May be the Muṇḍāi-kanyās below the small āmalakī of the mukhaśālā, previous work.

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9. After closing the Arāgaḍa quarry 3721 stones reached in ḍholas of two heads through the Dayā river. After counting the stones the boatmen received : 742 māḍha

10. The Biśoi of Bāraṅgagaḍa obliged us very much by sending sāraṅgibamboos, and for that he was given the title of Pāṭa-sāhāṇi of Nīḷādrigaḍa with the village Pratāpa as a gift.

11. For large aḷasā-kanyās again : 22 māḍha

12. For having made a row of rathakas on the pīṭha the team of Dāma Mahāraṇā of 60 persons, with Rāma and Nidhi received : 30 māḍha
for their victualling : 1 bharaṇa

13. For the sacred-thread ceremony of his son the Ratha Bandhu Sāmanta, knower of Śilpa-śāstras, of Vedapura received : 1 bharaṇa
12 gauṇi fine rice

14. Nidhi Mahāraṇā had made aḷasā-kanyās on the bharaṭi and received, including victualling charges : 41 māḍha

15. For arranging on the ground the anurathas in three parts the team of Dāma Mahāraṇā received : 10 māḍha

16. Gopīnātha Baḍajenā gave 30 māḍha of his own for making a statue of the Svāmī of Bālimaṭha, his Guru.
That person had supplied regaḍāsāhāṇa (stones). For this he received the honour of being made supervisor of the Brahmagāyatrī temple and was given a small fort near Bālimaṭha.

LEAF XLIX

1. The Mahāśrama ordered that Dāmodara Baiṭhāru Sunāpiṭhiā Citāniyā* Mahāraṇā, his goldsmith (cinhurā) should come with Balaśrī from Puruṣottama. For sending this urgent message : 25 gauṇi

2. Dāma Baiṭhāru Citāniyā and Sūtradhara, after signing a bond were handed over 17 uncut rubies of the size of a thumb-ball and 100 gold-pieces (aśrapī) from the Treasury. The rubies were set into cups of gold with claws, shaped like monkeys' paws and fitted on the stone-lotus in rows of 8, 6 and 3 pieces. Baiṭhāru received : 2 māḍha

* Goldsmith who makes ornaments for images of divinities.

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3. The Sūtradhara had made an 8 hasta long padma-daṇḍa (lotus-emblem with a stem) with cavities for setting the rubies, he received : 1 māḍha

4. Dāma Mahāpātra, Sukhi Mahāraṇā and five other pathuriās who had made the khapuri, received : 4 māḍha
24 gauṇi

5. For the śilpīs on the Dola Festival (Holi) : 3 paṇa kauri

6. On Dola Pūrṇimā day* the wall of the Ṭhākurāṇī temple was finished. On the recommendation of Gadādhara Mahāpātra 24 people received : 40 māḍha
24 gauṇi

7. A letter arrived from the Mahāśrama which said, that the covering roof (garbha-muda of the Ṭhākurāṇī temple ?) must be completed at the latest on the 13th day of Jyeṣṭha śukla of the 18th aṅka** (?).
To the messenger who brought the letter : 7 gauṇi

8. To the water-carriers : 12 gauṇi
Bhramarabara received : 4 gauṇi fine rice

9. The muṅg in the central stores was developing mould, therefore the Chief Overseer distributed it to the śilpīs on Caitra Maṅgaḷabāra : 4 bharaṇa
24 gauṇi

10. Twelve pathuriās with Nārāyaṇa Mahāpātra received for work on the doorjambs : 10 māḍha

11. After finishing the siṁhāsana Viśi (Viśvanātha) Mahāpātra and others received the balance of their contract : 16 māḍha
To six female workers for polishing the siṁhāsana : 3 gauṇi

12. For removing with ropes the wooden plug-pole from the drain (of the garbha) ten workers : 6 gauṇi

13. On the eighth day of Vaiśākha kṛṣṇa pakṣa twelve people came from Puruṣottama for performing the sacrifice (yajña), they were given two groups of attendants who received : 1 bharaṇa
32 gauṇi

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* *of the 17th aṅka (Ms. 2).*

** which must mean 17th aṅka, because on this date in the 18th aṅka the temple was already consecrated.

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14. On Akṣaya tṛtīyā (3rd day of Vaiśakha śukla pakṣa)* the yajña began at the appointed place on the northern side. The expenses of the yajña were met from Koṭhadeśa (the land of Nimāpaḍā). For it were provided : 10 māṇikā ghee
20 pair of cloths

LEAF L

1. On the day when the yajña began, Yogī Mahāpātra fell from the scaffolding and died (Hari chāḍibā).
For cremating his body Balaśrī gave 1 māḍha from his own pocket. This expense is not from our Treasury (written in smaller characters).
2. All the śilpīs received their wages : 122 māḍha
They gave 100 māḍha from their Charity Fund for the family of Yogī Mahāraṇā. Balaśrī also gave 7 māḍha. This did not come from the Treasury (written in smaller characters).
3. Soma Mahāraṇā, for returning to his home with his uncle Nidhi Mahāraṇā received : 2 māḍha
17 gauṇi rice
12 gauṇi muṅg
4. On Śītala Ṣaṣṭhī, the 6th day of Jyeṣṭha śukla pakṣa, the Mahāśrama was to come, but did not arrive. Ten people who had gone to the bank of the Kañci river came back and received : 10 gauṇi
5. On the 13th day of Jyeṣṭha śukla pakṣa, in the second watch of the morning, in accordance with an earlier direction of the Mahāśrama, 22 people took the kalaśa on top of the khapuri, they received : 22 pieces of red cloth
6. When on Caturdaśī day the Sūtradhara and Gadādhara Mahāpātra went on top to fix the lower part of the kalaśa, the people below were cheering them and ten drummers were playing. The drummers received : 10 gauṇi
7. When up to the second day of Āṣāḍha the kalaśa could not be properly set and fixed on the garbha the Sūtradhara sent a sealed letter (ākaṭa-patra**) and left on a palanquin for his village. This letter was taken by a guard, Dhara Siṁha to Biḍānāsī on horseback.
For his journey : 24 gauṇi

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* *of the 17th aṅka* (*Ms. 2*) (for initiating the consecration of the kalaśa of the main temple).

** A letter on palm-leaf sealed into a piece of hollow bamboo.

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Balaśrī left for Puruṣottama :

8. From the 3rd day of Āṣāḍha work on the main temple was stopped, and the people there were engaged in other work. Gaṅgā Mahāpātra with 24 and Nārāyaṇa Mahāpātra with 12 śilpīs continued to work. On that day Gaṅgā (Mahāpātra) received : 2 māḍha

9. On the 11th day of Āṣāḍha kṛṣṇa pakṣa Balaśrī brought Deuḷa-karaṇa Madhu Paṭṭanāyaka Paṭṭajośi Parichā (Chief Supervisor of the Jagannātha temple) and Kāśi Rājaguru. They stayed by the side of the store-room.
From the store-room : 7 gauṇi fine rice
2 gauṇi muṅg
2 kāhāṇa kauri

10. Four people were engaged for their service and received : 3 gauṇi

11. At a distance of 12 hasta from the Aruṇa stambha, where the Sūtradhara had measured out the position of the Trikāla Bandāpanā maṇḍapa,* the foundations had been dug out along his lines. In settlement of their accounts, these people received : 2 bharaṇa
20 gauṇi

12. Balaśrī went on a palanquin to the Sūtradhara's village Ḍihapāṭaṇā Pathuriāpaḍa. Nārāyaṇa Mahāpātra, Gaṅgā Mahāpātra and Gadādhara Mahāpātra accompanied him on elephant-back. To the palanquin-bearers : 7 gauṇi
To the hātiāḷas : 3 gauṇi

13. This is what happened during the Sūtradhara's illness :
His son Dharma Mahāpātra, who had gone to the southern regions with his uncle Nidhi Mahāpātra, had come back home. On seeing the condition of his father, he asked him : Is it a kasā khapuri or a basā khapuri ?** I shall myself set it up. Having said this, he went on elephant-back with Gaṅgā Mahāpātra to the work-site and stayed in Sūtradhara's house. He was given two attendants. To the attendants : 3 gauṇi
To the pāiṭāḷas and hātiāḷas : 7 gauṇi

* Maṇḍapa for the three daily pūjās to the Vijaya mūrti at sunrise, midday and sunset, the Nāṭamaṇḍapa.
** See note on khapuri in Appendix No. 8.

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LEAF LI

1. Sūtradhara's son Dharma Mahāpātra saw the plans (guṇā-gāra) and measured the temple from the big lion in front upwards. Four pathuriās assisted him and received each 2 gauṇi : 8 gauṇi

2. The elephant went back for Balaśrī. To the hātiāḷa : 2 gauṇi
3 paṇa kauri

3. Stay of the hātiāḷas with elephants in Ḍihapāṭaṇā for five days : 17 gauṇi

4. The Sūtradhara returned with Balaśrī to the work-site. When he arrived at the house where his son was lodged, two more servants were given to them. They received for three days : 4 gauṇi

5. Gaṅgā Mahāpātra and Dharma Mahāpātra took a new, 5 hasta long muguni stone for making anew the lower part of the kalaśa with a longer stem and a broader raised foot, having an edge (kaṇi) of 2 cauka (8 aṅgulas). On orders of the Balaśrī they received : 2 māḍha

6. Dharma Mahāpātra made one egārupaṭṭika-cumbaka-śilā* of 2 hasta height in the likeness of a lotus, in two halves and hollowed out in the middle. He received : 2 māḍha

   For this work done at night, two torch-bearers (masāliā) received : 2 gauṇi
   2 māṇikā oil

7. Under the direction of Dharma Mahāpātra, the 1 hasta deep round cavity (in the khapuri) for the kalaśa was enlarged on all sides in order to fit the egārupaṭṭika with the (copper) belts (cāpuāṇi) into the khapuri.
   Three pathuriās including Nidhi Mahāpātra and Rāma Mahāpātra worked on it for two days and received : 8 gauṇi

8. For the arrival of the Mahāśrama the house was cleaned by two people who received : 3 gauṇi

9. The egārupaṭṭika made by Dharma Mahāpātra, was taken onto the scaffolding and set into the newly made cavity in the khapuri by seven people, while six people were holding torches. Torch-bearers : 2 gauṇi
   Workmen : 3 gauṇi

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* See note on kalaśa and egārupaṭṭika in Appendices No. 9, 11.

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10. Sūtradhara, Gaṅgā Mahāpātra and Dharma Mahāpātra set the kalaśa during one night. The work was completed towards the end of the night. In recognition of this achievement on the order (or account) of Sahasramalla, Dharma Mahāpātra received : 5 māḍha, 1 pair silken cloths

11. For setting the two parts of the egārupaṭṭika-cumbaka onto the kalaśa (foot) Sūtradhara, Gaṅgā Mahāpātra and Dharma Mahāpātra received in recognition of their achievement : 2 māḍha

12. The Mahāśrama arrived on the Āṣāḍha śukla ekādaśī and with him the Rājaguru. He gave to the Rājaguru* : 1 māḍha

13. Wanting to safeguard the honour of the śilpī community, which was the Sūtradhara's main (iṣṭa) concern Dharma Mahāpātra returned to his village on elephant-back in the third watch of the night. On the order of Balaśrī and the chief overseer Dharma Mahāpātra was given 70 māḍha, but these were booked as wages for the śilpīs : 70 māḍha

14. On dvādaśī day the upper part of the kalaśa was carried by 12 workers by way of the scaffolding to the top of the garbha. Expenses : 3 gauṇi

15. Rāma Mahāpātra, Mukunda Mahāraṇā, Nidhi Mahāraṇā, etc., 12 people in all, fixed (the upper part of) the kalaśa in one day : 1 māḍha

LEAF LII

In the hollow (garbha) of the kalaśa-ratna-muda was put :

1. White paddy—2 gauṇi
   Dahi—2 kuñcā
   Navaratna stones—18 pieces
   Napuṃsaka śilā**—1 piece
   Haritāla stones (yellow orpiment)—5 tolās
   Pure camphor—10 tolās
   Muramaṅsi (seeds of fragrant plants)—8 tolās

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* Donation to Brāhmaṇas for removing obstacles.

** Napuṁsaka śilā=A eunuch goes towards the north till he finds a crossing of three roads. There he picks up a stone on which the Architect (Viśvakarman) engraves a triangle and a lotus. The stone is taken by the Purohita and placed inside the pedestal or kalaśa as a protective yantra.

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Sāla resin—10 tolās
Gold pieces (suvarṇa khaṇḍa)—12
Silver pieces (raupya khaṇḍa)—20
For depositing these in the kalaśa while reciting mantras, the Rājaguru received : 1 māḍha

2. To the musicians for playing on instruments on the occasion of the installation (pratiṣṭhā) ceremony of the padma-daṇḍa : 3 gauṇi

3. Ten śilpīs including the Sūtradhara, Gaṅgā Mahāpātra, Nārāyaṇa Mahāpātra took the padma-daṇḍa on their shoulders from the house of the Sūtradhara to the Hall of sacrifice (yajña-śālā). They were given : 12 pair cloths
For the Mahāśrama : 1 pair red silken cloths

4. When the yajña was finished 25 kārigars took the padma-daṇḍa to the garbha. They received : 25 kāhāṇa Pāṭa–(big) kauri
2 māḍha

Karma-dakṣiṇā : 2 māḍha
kenduli kastā (cloths)

Ghee : 10 māṇikā

Other expenses for the sacrifice : 7 kāhāṇa
12 paṇa kauri

5. The Mahāśrama stood on the pīṭha and when the padma-daṇḍa was brought, he touched it with his hands* and gave to the Rājaguru dakṣiṇā : 2 māḍha

6. When two watches of the day has passed, the padma-daṇḍa was set up in the kalaśa.** The Rājaguru gave it the pañcāmṛta snāna, and tied a large red silk cloth (nāli khaṇḍuā) over it*** taken from the store-room :

7. From Puruṣottama came a cook to prepare sacrificial sweets : 10 māḍha
(biri tāḍiā). For this he used :
biri (dal)—3 bags (puḍuga)
ghee—27 māṇikā
khaṇḍa guḍ—8 paśuri (1 maund)

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* Symbolic act of carrying the padma-daṇḍa.

** Symbolic union or marriage of the kalaśa and the padma-daṇḍa.

*** Orange silk cloth into which the entire text of the Gītagovinda is woven for the dhvaja-sthāpana ceremony. See note on Leaf LXIII, 9 on this ceremony.

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Thirty people carrying torches at the community feast : 12 gauṇi

Til-oil 4 pots

8. On the ground below the pīṭha all the kārigars were feasted with prasāda. To the 8 barbers who cleared the leaves : 8 gauṇi

9. After this function one large pot of sweets was taken to Dharma Mahāpātra, in the accounts listed as prasāda for the family of the Sūtradhara.

On the return of the elephant the hātiāḷa received : 3 gauṇi

10. The Mahāśrama, Rājaguru and others returned to Puruṣottama on four elephants. To the hātiāḷas : 30 gauṇi

11. Wages for 102 people who had worked on the compound wall : 45 māḍha

12. Gaṅgā Mahāpātra and Gadādhara Mahāpātra for the horses on the Horse-gate, received one instalment : 14 māḍha

13. Sūtradhara received : 10 māḍha

Seven Madurai kārigars received : 40 māḍha

14. For having carved images on the crowning of the base (pīṭha-muhāṇṭi)* and on the wall, mūrtikāras, including Rāma Mahāpātra and others received, in clearance of their accounts : 100 māḍha

15. For three (wooden) doors the carpenter Madhu Mahāpātra, Baṁśī Mahāpātra and eight other carpenters received in clearance of accounts : 40 māḍha

16. For the brass-knobs on the doors Nārāyaṇa Nāyaka received in clearance : 20 māḍha

17. On the order of the Sūtradhara Gaṅgā Mahāpātra, Gadādhara Mahāpātra and 40 other kārigars received a contract of 50 māḍha for work on the Ṭhākurāṇī temple.

Advance payment : 10 māḍha

18. For carving the big elephant : 30 māḍha

19. On the 13th day of Āṣāḍha kṛṣṇa (trayodaśī) Gaṅgā Mahāpātra who had worked on the egārupaṭṭika, received : 7 māḍha

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* This work could only be finished after the big scaffoldings have been removed.

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LEAF LIII

1. For setting the stones on the beki Vīra, Yogī and others received : 2 māḍha

2. The Mahābhāskara image to be installed (in the garbhagṛha) was to be made in blue (muguni) stone, because it was considered to be the most durable. But because the blue muguni would show the veins (vajra-dāga) when rubbed with oil during pūjā and would not look well, the Sūtradhara decided that it should be made of black muguni. Therefore the blue stone, on which the Mahāśrama had broken a coconut, was given to Gaṅgā Mahāpātra for a seated image of Ravi-Nārāyaṇa, under a contract of (Pl. 76) : 40 māḍha
Advance : 20 māḍha

3. For the 4 hasta 8 aṅgula* image the Sūtradhara took a black muguni stone from the construction-site to his camp. He was given : 1 piece Śunyā (māḍha)
1 bharaṇa

4. Gaṅgā Mahāpātra completed a part (the rough work) of the image with Dharma Mahāpātra. They received a further instalment of : 10 māḍha

5. The Poet Lakṣmīdhara from the Cola country came on a visit to see the Temple-construction.
Expenses for his stay : 1 bharaṇa

6. One servant Mahā Jenā at the community granary, who used to measure out grain, stole one puḍuga biri-dal. Three cart-loads of paddy were forcibly carried away (from his house) and deposited (in the stores). Hari Siṁha received : 6 gauṇi

7. Kāśī Ojhā, the coppersmith had made four tempered copper-cramps (*belts, Ms. 2*) for the cumbaka stone** and received : 1 māḍha
After casting the iron-girders some copper was left over, which the coppersmiths had taken away to their village. When Dharma Mahāpātra said, that he wanted it for the cramps of the cumbaka-stone, the pāika Madhu went to the village Bilipāṭaṇā and brought six copper pipes. He received : 3 gauṇi
1 māḍha

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* At another place in Leaf LX the image is said to be 5 hasta 4 aṅgula high. The measurement may have been taken with the prabhā in one case, and without the prabhā in the other.

** The two parts of the egārupaṭṭika were apparently secured together not only by copper-belts, but also by cramps.

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8. The Mahāśrama sent a royal letter (chāmu-ciṭāu) to intimate that he was coming before the end of the 17th aṅka to break a coconut on the new image. For conveying the letter Buḍhāleṅkā Sāntasāi received : 1 māḍha

9. After the Puṣyābhiṣeka ceremony* on the Pauṣa Pūrṇimā day the Mahāśrama, accompanied by the Rājaguru Bhuvaneśvara arrived on elephant-back on his way to Sāraṅgagaḍa.

10. For quickly cleaning up his quarters the workmen received : 3 gauṇi

11. But the Mahāśrama only broke a coconut (on the stone) in the Sūtradhara's camp and returned henceforth on elephant-back. For the attendants : 7 gauṇi

12. Narasiṁha Mahāpātra made a suggestion to the Sūtradhara that a railing (haṁsapāṭiā-jāli-bāḍa) should be made on top around the berm, as it was on the Ratha of Puruṣottama. The Sūtradhara did not agree and said, that instead of this, aḷasā-kanyās of 2 hasta height might be placed there. An order to this effect was therefore given to Dāmodara Mahāpātra, Narasiṁha Mahāpātra and Gadādhara Mahāpātra for 30 aḷasā kanyās of 2 hasta. The contract being for 60 māḍha, they received the total amount for urgent work :** 60 māḍha

13. The Sūtradhara said, that not only this, but also a seated image of Ravi-Nārāyaṇa of 3 hasta 10 aṅgula with Chāyā and Māyā*** was to be placed there in the centre of the outer border of the western pahaṇḍa. Gadei Mahāpātra received, on a contract of 30 māḍha : 20 māḍha 1 bharaṇa

14. In front of the other two niśā-temples there should also be images, one of Rāma's marriage and one of an Āśrama, (*Ms. 2.*)

15. Dāma Mahāpātra for making two images of Caṇḍa-Bhairava in sandstone,**** received : 1 māḍha

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* Purification ceremony performed while the moon stands in the asterism of Puṣya, but this date is here out of context. Ms. 2 has Piṇḍi abhiṣeka which appears more correct, since it is performed for Jagannātha on Āsāḍha pūrṇimā.

** Some of these aḷasā-kanyās are kept in the Guṇḍicā temple, Purī.

*** May be the headless image of a seated Divinity with two Devīs, now in the Orissa State Museum of Bhuvaneśvara.

**** One is in the Koṇārka Museum.

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For the Navagraha stone on the southern portal* of the mukhaśālā Gadādhara Mahāpātra received in clearance : 20 māḍha

16. Inside the mukhaśālā a scaffolding narrowing along the corbels was erected by 30 workers, for carving the lotus hanging from the ceiling. They received : 70 gauṇi
Yogī Mahāraṇā, Nidhi Mahāraṇā and Dāma Mahāraṇā, seated on the scaffolding, carved the corbels and the lotus-bud in 13 days. They received : 3 māḍha 14 gauṇi

17. For making a square bājaṇā maṇḍapa (for musicians during pūjā) on the eastern side, twelve people including Vīra Ojhā and Nidhi Mahāraṇā received (Pl. 108) : 13 bharaṇa rice

LEAF LIV

1. For keeping watch over the kalaśa tied in a silken cloth,** Hari Simha received as monthly wages : 12 gauṇi
2. On finishing the doorjambs (of the portal) towards the garbhagṛha, the śilpīs received in clearance of accounts : 10 māḍha
3. For dismantling the scaffolding down to the western lion 40 people worked seven days : 1 bharaṇa 10 gauṇi
4. For laying the floors of the three niśā-temples and the berm around the garbha with stone-flags, 36 people including Nidhi Mahāpātra received : 30 māḍha
5. On the western side of the garbha, for supporting the scaffolding, a big wooden joist had been inserted to a depth of 5 hasta into a cavity in the wall meant for the lion. For removing the joist a śagaḍi with two pulleys was fixed on the front of the scaffolding above the niśā-roof.
For this Kāśī Ojhā received : 4 gauṇi
6. Two ropes, 100 hasta long, fixed in rings on the front of the joist were pulled by 12 people from the ground. They received : 4 gauṇi
7. Standing on the scaffolding over the niśā-temple 3 people with crow-bars (śāvaḷa) inserted into holes in the joist, pushed it forward. They received : 1 gauṇi

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* This Navagraha stone is now on the outer portal of the Guṇḍicā temple in Purī.

** In order to prevent inauspicious birds, like vultures and owls, to sit on the kalaśa so long as the temple has not been consecrated.

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8. Thirty-two people lifted the lion image by way of the scaffolding above the niśā-temple. For lifting the lion they received : 3 gauṇi
9. Śāma Mahāraṇā, Nidhi Mahāraṇā and others pushed the tenon of the lion into the hole in the wall in two days. 12 workers received : 40 gauṇi
10. For building up the base (nāṭa-pīṭha) of the Bandāpanā maṇḍapa from the foundations upwards, Rāma Mahāpātra and other received : 10 māḍha

LEAF LV

1. On Wednesday, the 5th day of Āṣāḍha śukla pakṣa for making the scaffolding for building the pīṭha (*bāḍa wall Ms. 2*) of the Bandāpanā maṇḍapa : 7 gauṇi
2. For bringing stones onto the scaffolding 10 people : 12 gauṇi
3. For setting the stones of the kāṅgulās on the southern compound-wall, 60 workmen in teams of ten received wages for one month : 60 māḍha 2 bharaṇa 14 gauṇi
4. Forty pathuriās including Mukunda Mahāpātra, Rāma Mahāpātra, Gaṅgā Mahāpātra and Nārāyaṇa Mahāpātra received advance payment for the work on the Bandāpanā maṇḍapa : 30 māḍha
5. Wages of 214 workers for 3 months : 70 māḍha 8 bharaṇa 45 gauṇi
6. Śiva Mahāraṇā of Nuāgaḍa received for two makara-gargoyles on the southern side : 2 māḍha
7. For making two door-lions on the eastern front of the Bandāpanā maṇḍapa eight pathuriās including Gaṅgā Mahāpātra and Nārāyaṇa Mahāpātra were on a contract of 50 māḍha. They were paid : 20 māḍha
8. For having made the lions of the eastern lion-gate (gumuṭa) Madhu Mahāpātra and Bābājī Mahāpātra received wages : 10 māḍha
9. On Āṣāḍha Pūrṇimā, when two watches of the day were left, 24 people had placed the lions in position. They had worked by sāṅgi for two days : 24 gauṇi

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10. Yogī Mahāraṇā placed three kalaśas on the three niśā-temples. For making and fixing them he received :	5 māḍha
Four Mahāraṇās who assisted in setting the kalaśas :	2 gauṇi
11. Rādhā Mahāpātra for making four dvārapālas :	4 māḍha
12. Eight bullock-carts removed the wood and bamboo (of scaffoldings) through the southern gateway. Work of two days :	3 gauṇi
13. On the sixth day of Śrāvaṇa, for fixing the three images in the lower shrines of the niśā-temples, with karāḷa, Rāma Mahāpātra received (Pl. 39) :	2 gauṇi
14. For making 2 dvārapālas (on niśā-temples ?) Rādhā Mahāpātra received :	2 māḍha
15. For placing three (Sūrya) images on the southern, northern and western garbha-meḷāṇa (behind the niśā-temples) 12 workers including Rāma Mahāpātra and Yogī Mahāraṇā received (Pl. 34) :	4 gauṇi
16. For bringing these three images on the niśā-scaffoldings by sāṅgi 10 people received :	8 gauṇi
17. After a heavy rainfall 25 workers and 12 women cleaned and rubbed the platform (pīṭha) of the temple and other places :	17 gauṇi
18. For setting the kāṅgulās on the eastern compound wall, 17 people received :	20 māḍha
19. On Śrāvaṇa kṛṣṇa ekādaśī Gaṅgā Mahāraṇā (*for supervising the whole kāṅgulā-work, Ms. 2*) received :	1 Sūrya māḍha
20. For dismantling the scaffolding of the pīṭha of the whole temple in 4 days, 40 people received :	10 gauṇi
21. For making the four images of Chāyā, Māyā, Sandhyā and Śraddhā* Gaṅgā Mahāpātra, Rāma Mahāpātra, Bāsu Mahāpātra and Aparti Mahāraṇā received each :	4 māḍha
22. On the Trayodaśī day of Śrāvaṇa kṛṣṇa pakṣa the first ceiling of the Ṭhākurāṇī temple was completed. For bringing the stones 112 stone-carriers received :	4 bharaṇa 30 gauṇi

* Perhaps some of the Sūrya-Śaktis in the interior of the mukhaśālā.

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LEAF LVI

1. For work on the Ṭhākurāṇī temple 32 pathuriās under the supervision of Gadādhara Mahāpātra :	24 māḍha
2. On Śrāvaṇa śukla pañcamī, for making 240 female dancing figures (Nāṭa-mūrti) to be supplied within 3 months for the Bandāpanā maṇḍapa, 40 people, including Viśi Mahāpātra, Bāsu Mahāpātra, Lakhana Mahāraṇā and Nidhi Mahāraṇā received a contract of 300 māḍha. Down payment (Pl. 86-96) :	120 māḍha
3. For making the four rows of pillars in the Bandāpanā Maṇḍapa 30 pathuriās with Nārāyaṇa Mahāpātra and Śāma Mahāraṇa received an instalment of :	10 māḍha 2 bharaṇa 4 gauṇi
4. For making a scaffolding 24 hasta high on the berm (pahaṇḍa) of the pīṭha and a ramp of wood and bamboo on the eastern side, 2 hasta wide, coming up from two opposite directions, with 230 wooden poles, 130 people worked eight days and received :	130 small māḍha of 3 cinā each
5. Having constructed the plain portion of the compound-wall on the eastern side, 22 pathuriās received wages for 3 months :	14 māḍha 1 bharaṇa 14 gauṇi
6. For making double stairs facing two sides (do muhān barata) on the western side of the Bandāpanā maṇḍapa 13 men worked 18 days and received (Pl. 84) :	13 māḍha lotus-marked
7. On Bhādra kṛṣṇa aṣṭamī the setting of stones on the pīḍha (roof) of the (Bandāpanā) maṇḍapa was started. 24 people received :	24 māḍha
8. For placing stone-slabs and corner-stones (dhāriṇī) on the berm eight pathuriās received :	14 gauṇi
9. To the overseers :	45 māḍha
To the hātiāḷas :	14 gauṇi
To the guards, besides their victualling :	28 gauṇi
To the mahājanas of Devapura :	25 gauṇi

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10. The Biśoi of Golara came to see the works. Expenses for his attendants during his stay : kauris 3 kāhāṇa 12 paṇa

11. For making small sedant lion-figures (āḍa-simha) five for the top of the Bandāpanā maṇḍapa and two for the base, seven in all, Viśvanātha Mahāpātra with 25 workers received a contract of 33 māḍha. Advance payment (Pl. 97) : 3 māḍha

12. The Madurai kārigars, 7 men, the Khiching kārigars, 8 men, the Nuāgaḍa kārigars, 12 men, received monthly wages for carving the flower–, creeper–, and other ornamental bands on the pīṭha (of the Bandāpanā maṇḍapa) : 103 māḍha

13. On the Sūtradhara's orders Rāma Mahāraṇā and 10 other people made 40 small love images (bandhamūrtis probably for the base of the main temple) and received : 40 māḍha

LEAF LVII

1. To the team of Nārāyaṇa Mahāraṇā and Gaṅgā Mahāpātra for making 10 big (standing) bandhamūrtis for the upper jāṅgha (of gaiṇṭhāḷa and mukhaśālā) (Pl. 54-55) : 10 māḍha

2. To Gaṅgā Mahāpātra for making a Kṣetrapāla image : 3 māḍha

3. On the New-Year day of the 18th aṅka of the victorious reign of the Mahāśrama, Gaṅgā Mahāpātra took a small stone elephant for presentation at the Śunyā ceremony. Expenses for the elephant going to and coming back from Puruṣottama : 24 gauṇi

   On a written order Gaṅgā Mahāpātra received : 3 māḍha

4. After quarrying stones at Nīlagiri, Rājiva and 13 other people returned and received, in clearance of accounts during 5 years and 3 months : 45 māḍha 2 bharaṇa

5. Viśvanātha Mahāpātra and 25 other people who had a contract for making seven lion-figures for 33 māḍha received* (Pl. 97) : 18 māḍha

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* See Leaf LVI, 11.

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6. In consequence of a letter dated dvitīyā oṣā (Āśvina kṛṣṇa aṣṭamī) 42 people who had carried on work during the Cāturmāsyā (rainy season), were on their representation permitted to go home this year and received : 10 māḍha, 3 bharaṇa, 14 gauṇi

7. On the 13th day of Āśvina śukla pakṣa, for roofing the gaṇḍi of the Ṭhākurāṇī temple, the team of Gadādhara Mahāpātra of 25 people received : 40 māḍha

8. To 43 people who carried stones to the first pīḍha of the Bandāpanā maṇḍapa during 8 days : 2 bharaṇa coarse (pāñcakuḷiā) paddy

9. As the stocks of rice in all stores were exhausted 40 bullock-carts were sent to fetch some from the Bakreśvara Daṇḍapāṭa stores. For the journey : 34 gauṇi

10. The hātiāḷas with two elephants and the pāiṭāḷas removed the sand on the western side of the temple : 12 gauṇi

11. For a wooden palanquin with ivory inlay-work for the portable image (vijaya pratimā) the carpenter Bāsu received : 7 māḍha, 2 elephant tusks from the stores

12. Forty people with Viśi Mahāpātra received, for making bandha-mūrtis : 180 māḍha

13. For setting the dance sculptures (nāṭa-mūrtis) into the pillars of the Bandāpanā maṇḍapa, to Gaṅgā Mahāpātra : 3 māḍha

LEAF LVIII

1. For setting images made beforehand on the four rows of pillars (of the Nāṭa maṇḍapa) and giving them finishing touches, he (Gaṅgā) received : 20 māḍha

2. The workers who had made 102 kāṅgulās for the compound-wall received : 30 māḍha

3. After finishing all the pīḍhas two lion-figures were taken up on the front of the pīḍha-roof of the Ṭhākurāṇī temple, 12 people worked 2 days and received : 3 gauṇi

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4. For making the cūḷa (śrīpiṇḍi) of the Ṭhākurāṇī temple (Jagamohana) Gadādhara Mahāpātra with 40 people received (Pl. 99) : 80 māḍha

5. To 30 people who had carried the stones up to the Jagamohana of the Ṭhākurāṇī temple : 2 māḍha
2 bharaṇa
4 gauṇi

6. For lifting four lions up to the pīḍha roof of the Bandāpanā maṇḍapa by kaḷasagaḍi, to 42 people : 10 māḍha

7. On the Ekādaśī day of Āśvina kṛṣṇa pakṣa Bāsu Mahāraṇā, Nidhi Mahāraṇā and 30 workers delivered to the Sūtradhara the padma-piṇḍi and aḷāśrī of the roof (cūḷa) of the Bandāpanā maṇḍapa, made within three months, according to their contract, and received : 12 māḍha
30 bharaṇa
14 gauṇi

8. Eight people for having taken the ceiling stone (Nāṭa-padma-muda-pathara)* to the pīḍha of the Nāṭamaṇḍapa by sāṅgi received (Pl. 93) : 24 gauṇi

9. To 122 people who had done miscellaneous work, clearance : 120 māḍha

10. To Gadādhara Mahāpātra for supervising the construction of the Ṭhākurāṇī temple : 30 māḍha

For making the image of the Ṭhākurāṇī** Gaṅgā received (Pl. 99) : 10 māḍha

11. For buying the two halos (prabhās) for the portable images from the brass-worker Dāma Nāyaka : 12 māḍha

12. On Daśaharā day the work was stopped. On the order of the overseer a feast was given to the śilpīs, for this : 2 puḍuga fine rice
1 puḍuga muṅg

for vegetables and other things : 17 kāhāṇa
12 paṇa kauri

13. According to the measurements traced by Gaṅgā Mahāpātra, 70 workers under his direction excavated the whole foundation for the kitchen-building in 3 days and received (Pl. 108) : 1 bharaṇa
24 gauṇi

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* Ceiling stone with a big lotus-flower, on whose petals are carved dancers and musicians. It is now in the new Museum of Koṇārka.

** It is the Brahmagāyatrī, a ten-armed seated image of the Devī, holding the emblems of Sūrya, Śiva, Viṣṇu, Brahmā, abhaya and varada-mudrā. See drawing Plate 99.

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14. To Madhu Mahāpātra for fixing mithuna images on the base of the temple : 34 gauṇi

15. Raw lime-stone was brought from the southern part of Uḍradeśa (Orissa) expenses : 12 māḍha
For crushing it with the grinding wheel (ghaṇā) 10 people received : 2 māḍha

LEAF LIX

1. For setting up the wooden canopy (kanaka muṇḍāi)* over the image in the shrine one man worked 7 days and received : 2 māḍha

2. After having finished the fine chisel-work on the doorjambs of the mukhaśālā, Nārāyaṇa Mahāpātra, Gaṅgā Mahāpātra and others received clearance : 3 māḍha

3. Of the smaller stones that were left over, 12 bullock cartloads were sent to the Gaṅgeśvarī Devī of Bayāḷisabāti on the order of Gaṅgā Mahāpātra. The bullock-carters received : 34 gauṇi

4. To measure out the ground plan of the Gaṅgeśvarī temple the Sūtradhara's son Dharma Mahāpātra came on elephant back. Expenses : 8 gauṇi

5. Sūtradhara sent a letter to Biḍānāsī through Paṭiā. The pāik received : 24 gauṇi

6. 122 workers had finished their work, and when leaving for their village, they received in clearance of their accounts : 40 māḍha

7. The sheds of the black-smiths and of the carpenters were dismantled, 30 people worked 2 days : 24 gauṇi

8. For building up seven walls of the kitchen-house from the foundations to the roof-level, 45 people worked $1\frac{1}{2}$ months and received : 130 māḍha

9. On Kārttika kṛṣṇa pañcamī the Deuḷi camp was closed. On the western side (of the temple) along the river a small village was to be built for the temple-servants. Mādhava Miśra Bhaṭṭa and 40 other people received the land as a gift plus : 70 māḍha
and 370 wooden poles were brought from the work-site.

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* In Orissan temples all the pūjā-images are covered by a small wooden canopy, to protect them from stones and other things that might fall on them, and these are called kanaka-muṇḍāi.

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10. For two pairs ceremonial umbrellas, one red and one white, from Pimpal (Pipli) : 12 māḍha

11. Two trāsas (big heart-shaped ceremonial emblems) were purchased from Banu Mahāraṇā of Pimpal : 4 māḍha

12. Bāsu Mahāraṇā took gambhāri wood (Gmelina arborea) and made a bedstead (palaṅka) with a padma-yantra engraved on it, for the portable image : 7 māḍha

13. For paving a 4 hasta wide and 7 hasta long strip of ground from the Aruṇa-stambha to the Bandāpanā maṇḍapa, and 24 hasta long from the Bandāpanā maṇḍapa to the Siṁha-dvāra in front, with 730 flag-stones, 32 kārigars received : 60 māḍha

14. For plastering the walls inside the mukhaśālā and the aḷasā-bāḍa (inside wall of the portal) with cunā (lime) up to the height of a man, 5 women workers received : 14 gauṇi

LEAF LX

1. 300 tolās silver were given to Dāma Baiṭhāru for making two waterpots with spouts (padma-jharī), two standing mirrors, four big bowls and two ārati-lamps. Charges for the casting : 10 māḍha

2. For making the roof of the kitchen-house under the supervision of Vidyādhara Mahāraṇā 30 people carried stones. He received on their behalf : 10 bharaṇa 4 gauṇi

3. Forty bullock-carts with paddy arrived. The carters were given : 24 gauṇi

4. For four śamiānās (candrātapa-candua) from Banu Mahāraṇā, expenses : 34 māḍha

5. For closing the Kāduā-canal on the southern side of the temple, sand was shifted by two elephants for 12 days. To the hātiāḷas : 1 bharaṇa 4 gauṇi

6. For building a well (on the north of the mukhaśālā) 24 pathūriās received : 14 māḍha 23 gauṇi

Carrying 523 stones for the well : 10 māḍha 1 bharaṇa 3 gauṇi

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No. 7–II

(From Ms. 2)

7. White stones came from Tāpaṅga and according to a letter from the Rājaguru a platform (altar) was to be made from this 3 hasta 4 aṅgula square with four cavities in the corners and in the centre a place for putting a yantra for the Puroḍāśa (sweet-meat) sacrifice (baḷi). Sūtradhara received : 1 pair silken cloths

8. From another piece of white stone Viśvanātha Mahāpātra made an image of Śāmba : 2 māḍha

9. For plastering with lime (cunā) the uppermost part (of the temple) from the Deuḷa muṇḍi to the aḷāśrī (i.e. the viṣama and beki) Danei Cunurā with 3 people worked for five days and received : 2 māḍha 14 gauṇi

10. For making a nākacaṇā* kalaśa with a pedestal for the Nāṭamaṇḍapa : 3 māḍha

11. On hearing about this nākacaṇā kalaśa, the wife of the Sūtradhara came to see the temple construction, and on the instructions of the Chief Overseer she was given a blue silk-sāri.

12. When Viśi Mahāpātra supplied three kanyā figures, Nārāyaṇa Mahāpātra objected to one of them, saying it was the portrait of his (Viśi's) wife and therefore could not be placed on the temple. Therefore The image was rejected and only two images accepted, for which he received : 4 māḍha

But Gaṅgā Mahāpātra intervened and said, that the image had been carved on a lotus-pedestal like that of a goddess and therefore should not be taken exception to. Thus he (Viśi) received again : 2 māḍha

These images were set up in the Bandāpanā maṇḍapa.

13. Bāsu Mahāpātra and 2 other people made a small tank for receiving the pūjā-water (pādodaka-kuṇḍa) by the side of the mukhaśālā (below the drain).
He received : 3 māḍha 7 gauṇi

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* Nākacaṇā is an ornament for the nose in form of a tiny vase or a falling drop, and thus may be a technical term for an elongated kalaśa.

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14. In the 18th aṅka of the victorious prosperous reign, on Kārttika śukla daśamī, Rājaguru Bhuvani (Bhuvaneśvara) and Ānanda Ratha of Narasiṁhapura came on the order of the Mahāśrama and gave the measurements for the sacrificial halls (yajña-śālā). By the side of the Bandāpanā maṇḍapa towards the east three maṇḍapas 24 hasta square were built, first the garbhādhāna-śālā,* then the snāna-śālā** and then the nyāsa-śālā***. Between one and the other hall a gap of 1 hasta 10 aṅgulas was left. For this work 14 pathuriās and 27 other workers received : 5 māḍha
24 gauṇi

15. To the south of the Aruṇa-stambha a puroḍāśa-śālā**** was built, 10 hasta square. Two pathuriās and 10 women workers received for three days : 1 bharaṇa
30 gauṇi

16. On the side of the mukhaśālā towards the north an aṅkuraropaṇa-śālā***** 30 hasta long and 17 hasta wide was made. Ten people received : 17 bharaṇa
(or gauṇi)

17. On the western side a maṇḍapa 10 by 10 hasta was made for sacrifices (baḷi-śālā)******, to 12 people : 30 gauṇi

18. On the side of the mukhaśālā towards the south a yajamāna-śālā*******, 12 by 12 hasta wide was made by 12 workers who received : 40 gauṇi

19. To the South of the Aruṇa-stambha a pīḍha-cāḷa yajña-śālā******** was made 12 by 12 hasta wide. For this work : 1 bharaṇa
40 gauṇi

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* For burying the image in rice (to bring it forth from the womb).

** For bathing the image with sacred waters.

*** For giving the life-breath to the image.

**** Temporary hall for making pūjā-sweets.

***** Shed for sowing rice, uḍad, wheat, muṅg and til. This is the pañcaśaṣya (five grains).

****** A baḷi śālā is a place for animal sacrifices, but where these are not performed, also khicaḍi, biri sweets, fruits and kuṣmāṇḍa are called baḷi.

******* For the patrons of the sacrifice, here the Rājā and the Rāṇī.

******** A hall with pīḍha-roofs for Homa sacrifices.

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20. Two rooms of the kitchen house were reserved for the caru-śālā*. From there to the yajña-maṇḍapa a covered pathway 30 hasta long was made, closed also from the sides. Making charges : 40 gauṇi

21. For making small yajña-śālās (with kuṇḍas) near every Gate-temple and one below the western niśā, working charges : 30 gauṇi

22. Twelve pairs of silken cloths for the 12 Ādityas** : 34 māḍha

23. Mahādevī sent 16 pairs of wrappers for the deities. One chest from the Mahādevī arrived on elephant-back. On handing it over the hātiāḷa received : 15 gauṇi

The chest contained the following things sent by the Mahādevī :

25 pairs of turban cloths for the overseers
237 pairs of cotton cloths for the śilpīs
226 gāmchās for religious functions
28 brass garās
4 lampstands
1 sahasradhāra snānapātra (bowl with 1000 holes)
2 small halos (prabhās)
5 sets of pātrasāja (containers with all 16 objects needed for pūjā)
4 padma-jharī (loṭās with spouts)
6 standing mirrors (darpaṇa)

These had been bought all together for : 380 māḍha

24. From the big temple of Puruṣottama arrived five ceremonial flywhisks (cāmaras), 100 tolā camphor and 12 pieces white sandalwood.

Red sandalwood : 2 māḍha

Arka-wood (samidh) cut to pieces for the sacrifice*** : 2 māḍha

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* For making pūjā-khicaḍi (rice mixed with dāl and other ingredients).

** Secondary pūjā images representing the 12 aspects of Sūrya on various places of the temple : 3 in the upper niśās, 3 in the lower niśās, 3 in the meḷāṇa of the garbha and 3 above the portals of the mukhaśālā.

*** arka-samidh=fire wood of the Calatropis Gigantea, specially sacred to Sūrya and used in Sūrya sacrifices.

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25. For making śruvas, śrucs, praṇitās, prokṣaṇīs (different kinds of laddles for the sacrifice), udūkhala (mortars), mūṣaḷa (pestles), Bāsu carpenter received : 5 māḍha

26. On the Fullmoon day of Kārttika (Kārttika Pūrṇimā, an auspicious date) 28 śilpīs, after having purified themselves, took the Pūjā-image, covered with a red silken cloth, from the house of the Sūtradhara, carried it by a new sāṅgi and placed it in the garbhādhāna śālā, while all were chanting : Haribol !

Seven pathuriās took 12 bharaṇa paddy and covered the image with it*. For their work : 24 gauṇi

LEAF LXI

1. For closing the Kādua (maṅgaḷa) canal on the western side of the temple issuing from the village Ḍihapāṭaṇā and running to the ocean Samani Pātra received : 3 māḍha
2 kuṇḍaḷas (earrings)

2. Vidyā Jenā of Golaragaḍa had presented 700 wooden posts and 10,000 bamboo poles from the forest of Bāṅgurilaṭā. For this he received the title of Pāikrāya (Leader of pāiks) and 1 turban-cloth
1 staff with gilt handle
1 pair kuṇḍaḷas

3. For performing the lustration (abhiṣeka) of the Sūrya-image Nārāyaṇa Mahāpātra with 7 Paṇḍās had brought water from the Sūrya-Gaṅgā. They were settled in a village called Mādhipura for the service of supplying water to the temple (jaḷābaḍu-sevā). They received dakṣiṇā : 4 māḍha

4. For the (jīvana)-nyāsa** of the Bhagavatī image and the consecration of the Siddhācaṇḍī Durgā temple, Vāmadeva Mahāpātra received sāmantadakṣiṇā : 4 māḍha

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* This symbolizes the womb of the Universe.

** Ceremony in which the life-breath is given to the image.

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5. During the time of the ceremonies for the consecration of the pūjā-image, the lustration of Rudra took place with the reading of the Aṣṭādhyāya.* This was performed on the shore of the ocean on a Śiva-liṅga called Vāmadeva.

   Māgā Miśra, who performed the abhiṣeka received as dakṣiṇā : 3 māḍha

   and a gift of land of 2 guṇṭhas.

6. For lifting and transferring the pūjā-images to the nyāsa-maṇḍapa (from the other maṇḍapas) twenty Suāra Sevakas (inferior Brāhmaṇas) were employed and received : 13 gold māḍha

   For their daily service they were settled in the Mādhavapura village (to-day Mādhipur).

7. On the day when the image of Mahābhāskara had been taken from the pratiṣṭhā maṇḍapa and installed on the piṇḍi (siṁhāsana) the Sūtradhara Sadāśiva Sāmantarāya was given land, etc. (for building a village) to be named Sāmantarāpura,** and with it : 27 gold māḍha with lotus-mark

8. After the consecration of the temple the portable image (caḷantī mūrti) was taken for a journey around the town (nagara-bhramaṇa), from the temple to the village Danturi-gaḍa, from there to Laṅkapaḍā, and then along the main road back to the Bandāpanā maṇḍapa, where it was placed. For those who accompanied the procession with drums, gongs and umbrellas the expenses were : 77 bharaṇa
   17 māḍha

9. On the western side of the niśā-taḷapīṭha (base of the western niśa-temple) an image of Rāma's marriage was set up by Gadādhara Mahāpātra, for which he received : 20 māḍha
   kuṇḍaḷas of 2 tolās

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* Śatarudrīya=Adhyāya XVI of the Śukla Yajurveda in praise of Rudra.

** Still existing, to the north-east of the temple towards the ocean.

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LEAF LXII

1. After the pratiṣṭhā and nyāsa, the three images of Ādityas were carried by Suāriā Paṇḍās who were at the temple on permanent service to the three sides of the border of the pahaṇḍa below the temple* : — 2 bharaṇa 7 gauṇi

2. For making and setting up two images of Gaṅgā and Yamunā, on the front or the pillars of the Mahāgāyatrī temple (*Ṭhākurāṇi temple, Ms. 2*), Yogī Mahāpātra received : — 20 māḍha 1 bharaṇa 7 gauṇi

3. For performing the nyāsa ceremony of the three Pārśva-devatās on the niśā-temples to Madhu Ācārya : — 12 māḍha
and Raghu Ācārya : — 12 māḍha

For keeping watch over the water-vessel (Sūrya-ghaṭa) and the Homa Agni (Agnirakṣā) dakṣiṇā : — 1 māḍha

4. Gadādhara Mahāpātra received the title of Śilpi-nāyaka (Chief of śilpīs) together with : — 2 jhulā kuṇḍalas**and 3 māḍha

Bhuvani Rājaguru (on behalf of the Mahāśrama) conferred this title upon him by winding the turban-cloth on his head : — 3 bharaṇa 10 gauṇi

5. (From the 3 aṅka, Ms. 2) Three agents, Dharma Pāikrāya, Rāghava Pāikrāya, Dinu Pāikrāya with Īśāna Mahāpātra, who had travelled throughout Uḍrakhaṇḍa (Orissa) to collect śilpīs and now again to find Brāhmaṇas for the pratiṣṭhā ceremony, received one village called Pāikrāyapura, and Īśāna Mahāpātra received dakṣiṇā : — 14 māḍha

6. Viśvanātha Mahāpātra with four pathuriās had made the image of the Mahāśrama with four Ministers for the siṁhā-sana, in the attitude of receiving from the hands of the pūjārī the garland from the pūjā-image after the pratiṣṭhā ceremony (prasādalāgi). He received (Pl. 77) : — 30 māḍha 1 pair silk cloths kuṇḍaḷas of 2 tolās

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* Before, in Ms. 2 in Leaf LIII, two images : Rāma's marriage and an Āśrama had been ordered for these places, none of them being an Āditya.

** Earrings worn particularly by the Sthapati community.

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7. Mahārathī, the Nāyaka of Viṅguragaḍa, who hadrecruited śilpīs throughout Uḍrakhaṇḍa, was given the title of Mahānāyaka, the right to supervise the service of the temple and, at the time of the first (daily) food-offering the right to stand by with a gold cane in hand. For making the cane he received : 27 tolā gold

8. Nārāyaṇa Mahāraṇā (*pātra, Ms. 2*) for making a Śveta Viriñci-mūrti* for the wall of the temple : 7 māḍha

9. Rājaguru Bhuvaneśvara who was the Ācārya** was given a gift of land and a bath of gold (kanakasnāna) of altogether*** : 100 tolā gold

LEAF LXIII

1. From olden times there had been a Mahābhāskara**** image in worship on this pīṭha (the Sūryakṣetra) of 2 hasta 8 aṅgula, but its features were worn off.

2. When a new image measuring 5 hasta 4 aṅgula***** had been installed in the Padmakeśara temple, the old image was immersed in the ocean (visarjana) by Nārāyaṇa Mahāpātra, who received with others : 2 māḍha

3. For the installation of the image (pratiṣṭhā) on the piṇḍi, the Ācārya received dakṣiṇā : 2 māḍha

4. After chanting the (Sūryamantra) 120000 times (japa of 12 ayutas) under the Sun-tree (arkavaṭa) in the compound (during the pratiṣṭhā ceremony), Bandhu Hotā also brought a Śeṣadeva image from the hall of consecration and set it up there******. He received : (Pl. 109 ?) 3 māḍha

5. After the pratiṣṭhā an image of Lakṣmī-Nārāyaṇa was set up on the niśā-pīṭha (of the northern side) and an image of Rudra-Sūrya on the niśā-pīṭha of the southern side (*and of kṣetrapāla (in the west) Ms. 2*) by Upanyāsācārya. He received : 4 māḍha

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* A six armed image of Śveta-Viriñci, Sūrya with attributes of Brahmā and Śiva; see Viriñci-Nārāyaṇa on Leaf XXXVI, 12.

** Religious director of the whole construction as well as Chief Ācārya of the pratiṣṭhā functions.

*** Set consisting of 1 ring, 2 wristlets, 1 necklace, 2 kuṇḍalas, 1 bowl (patri), all made of gold.

**** Most probably installed in the 9th century by Purandara Keśarī (See Introduction, Para 8).

***** Mentioned to be of 4 hasta 8 aṅgula on Leaf LIII, when the image was started.

****** Now in the Museum of Koṇārka.

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6. During the pratiṣṭhā ceremonies the Mahāśrama with his retinue was staying at the Padmakeśara camp. Expenses for his stay : 240 māḍha

7. For 84 pieces of silk cloth used in the pratiṣṭhā ceremonies of 84 images : 24 māḍha

   For the pūjā image a large khaṇḍuāpāṭa silk wrapper (with a design of red and orange squares) : 14 māḍha

8. On the day when the great pratiṣṭhā ceremonies ended, the Mahāśrama received all the śilpīs and gave each of them with his own hands 2 pairs of cloths and one lotus-marked gold-coin. Total : 346 gold coins

9. After the pratiṣṭhā ceremonies the Chief of the whitewashers (Cunurānāyaka) took a very long banner (Śoṣadhvaja) on top of the temple and tied it on to the dhvaja-daṇḍa. Rājamātā Kastūrikāmodinī, the Rājā and the Rāṇī and other members of the Royal family held the tassel at the end (aga-phuli) of the banner and made one circumambulation of the temple*. The cost of the red cloth was : 13 māḍha

10. On the order of the Sūtradhara Nārāyaṇa Mahāpātra removed the banner from the dhvaja-padma. (Siddhi-payment). His dues : 1 māḍha

11. Gaṅgā Mahāpātra for an image of the Mahāśrama as Archer (Lākhabindhā) received (Pl. 53) : 1 pair silk cloth
    2 kuṇḍalas of 5 tolās

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* This dhvajasthāpana-vidhi is prevalent in Orissa even to-day. When consecrating a new temple, a banner is tied to the emblem (āyudha) reaching down to the ground. The lower end is then bathed in holy water, which is soaked up by the banner till it reaches the emblem. This represents the bathing of the whole temple by the yajamāna, who holds the lower end of the soaked banner and with this in hand circumambulates the temple. After removing the banner the sthapatis cut it to pieces and wear these as turbans on special occasions.

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LEAF LXIV

1. The whole day and night (8 praharas during and after the installation of the image) the Sūktas (from the Ṛgveda) were recited, and when at the end of the night the sun rose and the first rays fell (on the vijaya image), āveśa-bandāpanā* was performed thrice, both to the rising sun and to the image. At the time of the Bandāpanā, the Mahāśrama gave to the sevakas : 15 māḍha

2. In the 18th aṅka of the victorious reign, on vasapa (vasuapa) Candramā Brahmā of the Śaka era (1178 Śaka=1257 A.D.) on Māgha śukla ekādaśī, the first pūjā with Ravinārāyaṇa Bandāpanā began in the Bandāpanā maṇḍapa. At that time the Mahāśrama placed his first donation before the image (in the garbhagṛha) for the daily pūjā : 100 aśrapi pure gold (jita sunā)

   These started the Temple-Treasury.

   To the sevakas : 7 māḍha

3. The great Kṣatriya (Kṣatriyavara) Mahāpātra of Nīlagiri maṇḍala, who had made arrangements for quarrying stones from Nīlagiri was awarded the honour of waving the cāmara (ceremonial flywhisk) (before the image) with a honorarium (sammānī) of: 307 māḍha

4. For making a small couch on the south side of the mukha-śālā for the portable image, clearance : 2 māḍha

5. For making a portable image of Jayadurgā Gāyatrī for the Ṭhākurāṇī temple, Dāma Kharuḍa received : 3 māḍha

6. Twelve Rājagurus received after consecration, at the time of their departure : 30 māḍha

7. When the Madhurai maṇḍala śilpīs left, they received : 82 māḍha

8. For two flywhisks (cāmaras) with gilt handles : 3 māḍha

9. For the consecration of the kitchen building Mādhava Hotā received dakṣiṇā : 2 māḍha

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* āveśa=a new entering.

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10. On the first day of Phālguna kṛṣṇa pakṣa, after the consecration the Mahāśrama with his retinue went back to Biḍānasī. Expenses for the escorting party : 12 māḍha 12 gauṇi

11. To the black-smiths land in Sānalapura was given for building their houses : 30 māḍha

12. Out of four dancing-girls (Māhārīs) who had come from Puruṣottama, three went back with the Dance-master (Mīnanāyaka) and received each : 2 gold circular earrings (kāpa) of 3 tolā

One Māharī was settled here for temple-service.

13. The Daḷabeherā of Kilā Bayāḷisabāti* received the title of Bhramarabara, and cancellation of revenue for 12 villages and a life-endowment of yearly : 20 māḍha
He was appointed as the Superintendent of the temple.

14. To the overseer Dharma Paṭṭanāyaka : 10 māḍha
To the overseer Madhu Sāmanta: 10 māḍha
To the overseer of the service (pāiṭāḷa parichā) : 10 māḍha
Maheśvara Bāhinīpati : 10 māḍha
To the camp-kitchen supervisor Viśvanātha Bāhinīpati : 20 māḍha
Thus a total of : 5o māḍha (?)

LEAF LXV

1. To 108 pathuriās who had supervised the entire work of the stone-construction, land was given in Saṇapura : 1 bāṭi 13 māṇa

2. The Vedapura Mahājanas received as collective dakṣiṇā : 230 māḍha

3. Twelve people including Rādhu Paṭṭanāyaka who had supplied ropes, guḍ and other articles to the camps, received in clearance (nikāsi) : 140 māḍha

4. Bhuvaneśvara Rājaguru again : 30 māḍha

5. Mahant Banudāsa who had supplied coconuts, received at the end land for the Maṭha**.

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* *Ms. 2 adds : who belongs to my clan (kuḷa).*

** The Mahant of the Naḍiāmaṭha near Koṇārka claims that the name of the Maṭha came down from the time when they supplied coconuts to the camps.

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6. 224 pathuriās who had worked from beginning to end with such loyalty and devotion as if it were their own (enterprise), received each : 1 pair cloths
2 māḍha

7. They were also given 15 māṇa land by the side of the Koṇākoṇa temple, to establish a centre for the pathuriā community, and a temple to Nāṭeśvara Śiva. Towards the building cost Nirañjana pathuriā received : 130 māḍha

8. 340 pāiṭāḷas received clearance : 84 bharaṇa

9. Sūtradhara received as a final gift : 100 gold coins (śunyā)

Gadādhara Mahāpātra received as final gift : 54 gold coins (śunyā)

Gaṅgā Mahāpātra, Chief of the Pathuriā community, received as a final gift : 134 gold coins (śunyā)

10. For making 84 beautiful images the pathuriās received in clearance : 14 māḍha

11. Dāmodara Paṭṭanāyaka, Ghana Paṭṭanāyaka and Mahāratha, these three together with the Chief supervisor and the Camp supervisor had been appointed by the Mahāśrama to form a Committee of 5 (pañcakoṭha) for settling disputes which may arise in the camps. Each of these received : 14 māḍha

The Chief supervisor and the Camp supervisor however declined to accept the payment.

12. Ten eunuchs (māiā) who had danced and sung in the camps, received : 12 māḍha

13. Fourteen labourers (pāiṭāḷas) who had assisted the vaidyas in collecting roots, barks, herbs, etc. drying and crushing them, received in clearance : 12 bharaṇa
The vaidyas received : 18 māḍha
10 bharaṇa

14. The camp-guard of Pāṭamahādevī Kastūrikāmodinī received : 3 māḍha
12 gauṇi

15. 130 people who had pulled cāpas with ropes along the banks, from one river to another and into the canal upto its end, received in clearance : 134 māḍha
11 bharaṇa paddy

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16. 74 women labourers under Sukhi Muliāṇī received in clearance : 2 bharaṇa rice

17. Bāsu Ojhā and 12 other black-smiths received in clearance : 30 māḍha

18. Śubha Gupta Kañcukī (Secret Intelligence Officer) who had supplied information to the Mahāśrama about what was going on in the camps through Chaḍa Siṁha received : 6 māḍha
Chaḍa Siṁha received : 11 bharaṇa

19. The tallymen received in all : 12 bharaṇa
The 32 barbers, who were in the camps, received : 32 māḍha
and land in Jāhāniā village : 10 māṇa

LEAF LXVI

1. Pāitāḷas received all together in clearance : 2304 māḍha

2. Those who had carried stones to the garbha under the supervision of Dāma Mahāraṇā received in clearance : 2313 māḍha
14 bharaṇa paddy

The above-noted deliveries were from 130 cartloads of paddy, which had come from Jaleśvara Daṇḍapāṭa on the 14th of Meṣa,* and also from the 240 cart-loads of rice which had came from the Mahendra Kaṭaka and from Śrīkūrma Kaṭaka (in the south).

3. For supplying mats and making temporary sheds Baḷi Paṭṭanāyaka, Rāma Jenā, Gopamuduli, and others received clearance : 130 māḍha

4. Sukhi Mahābhoi for looking after the cows received in clearance : 20 māḍha
30 bharaṇa

5. Kurāḍha Malla who had supplied all the pān received land in the village Bāhāṇiā : 7 māṇa,
7 guṇṭha,
7 viśvā

6. Viśvambhara Pradhāna Sāmanta of Teruṇḍiā, who had recruited labourers, received, from royal land in Tirupāṭaṇā : 1 bāṭi
10 maṇa

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* Most likely before the 17th aṅka.

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7. Sadānanda Gupta Paṭṭanāyaka, who had, on the Mahāśrama's instructions, looked after the workers on the site of the temple construction, received a gift of land (for a) village, (which then was called) Sadānandapura* : 1 bāṭi 3 māṇa

8. For sweeping the roads, camps and work-sites Rāma Rāuḷa and 30 people received land : 2 māṇa 1 bharaṇa 10 gauṇi paddy

9. For cleaning the latrines the leader of the scavengers Dadanu received land at Naḷamuhan : 10 māṇa 10 guṇṭha 40 gauṇi rice

10. 48 people who had supplied pure drinking water received in settlement of their dues : 10 kāhāṇa kauri 3 bharaṇa 14 gauṇi

11. 187 boatmen (cāpadaḷāi) received in clearance : 30 māḍha 12 bharaṇa 30 gauṇi rice

12. 24 oilmen who had pressed oil received : 3 bharaṇa 14 gauṇi paddy

13. 12 people who in all the camps had fed 130 standing torches with oil, received : 30 bharaṇa 14 gauṇi

14. 22 cloth-merchants (clothiers) who had supplied cloth to the camps, received : 340 māḍha 8 bharaṇa

15. To 34 people who had cleaned the cooking vessels : 14 bharaṇa
In the four camps were 22 cooks who received in clearance : 304 māḍha

LEAF LXVII

1. For the ivory palanquin with gold inlay, which had been ordered for carrying the Vijaya pratimā, balance : 15 māḍha

2. Balaśrī Basu Sahasramalla Varman received a turban with precious stones (ratnaśiropā).

* Land of this name is still existing near Koṇārka, but no village.

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3. Nārāyaṇa Mahāpātra who had supervised the construction, the daily progress of the work, the lifting of stones, etc. and had reported everything to the keeper of accounts, received : 1 pair silk cloths
2 earrings

For his own sculpture work, clearance : 183 māḍha

4. The title of Rāja-rājeśvaradeva was conferred on :
Tribhuvana Keśarī Devavarman.

5. Vīradeva Pāṭasāhaṇi of Keraṇḍimāḷa
Rājendra Sāmanta of Tāpaṅga Biṣaya
Ravibrahmā Śilpācārya
Jayadevarāya of Siṁhācaḷabalaya Maṇḍala
Aṁśumāḷī Varmā of Kaliṅgaghāṭi
Mahāmāṇḍalika Puruṣottama Brahmā Rāyaguru
Mahādeva Sathāi
were honoured each with a pair of silken clothes, a gold-ring with a stone and : 8 māḍha

6. On Rājā Tribhuvana Keśarī Deva was bestowed, on a personal royal order, the honour that on his visits to the temple he could have the right to perform the ārati (bandāpanā) all by himself.

7. Twelve people were appointed as guards (paḍhiārī) to guard the two portals every day. They received a gift of land in Siripūrpāṭaṇā (now Siripur) and for building houses : 50 māḍha

8. Kauśika (*Gotra, Ms. 2*) Narasiṁha Udgātā, who had travelled on foot for two years for bringing water from the 12 big places of pilgrimage (Mahātīrthas) for the lustration, received as a reward : 14 māḍha

9. Bāsu Ojhā delivered 80 brass-lamps and received : 7 māḍha

10. Mahant Banu Dāsa received : 1 pair silken cloths
1 ring and
12 māḍha

11. Balaśrī gave to Vāsudeva Mahāpātra the appointment of Administrator of food-offerings (Bhogabiśoi) of the temple. He was settled in the village Gaḍaviṅguḍa near Rupāsa and received an annual stipend of : 13 māḍha

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LEAF LXVIII

1.	Ācārya Bhuvaneśvara Rājāguru received dakṣiṇā :	20 māḍha
	Paricāraka Ānanda Ratha :	20 māḍha
	Brahmā Viśvanātha Rājaguru Mahāpātra :	10 māḍha
	Nyāsācārya Nārāyaṇa Ācārya :	10 māḍha
	Vedācārya Viṣvaksenācārya :	10 māḍha
	Raṅganāyakācārya Vedācārya :	10 māḍha
	Sevaka-niyoga (team of pujārīs for daily service) :	40 māḍha
	33 attendants (bārikas):	7 māḍha
	Agnidhara Viṣṇu Śarmā :	14 māḍha
	Atharvī Gopikā Udgātā :	3 māḍha
	Sūtradhara dakṣiṇā :	20 māḍha
	(all these payments were for the pratiṣṭhā ceremonies)	
2.	A chariot (ratha) 24 hasta high was made by 40 carpenters under the direction of Nārāyaṇa Mahāpātra Rathakāra (chariot-builder) from wood in the stores :	37 māḍha 7 bharaṇa 28 gauṇi
3.	Eight painters (citrakāra) came from Puruṣottama to paint the chariot :	4 māḍha
4.	Monthly expenditure on the temple-musicians :	1 bharaṇa 44 gauṇi
5.	Labour charges for building a store-room and treasury of 8 rooms out of materials from the stores :	23 māḍha
6.	For making a temple elevated on a platform (mañcadeuḷa)* dedicated to Candra-śekhara for use during the Ratha-yātrā :	403 māḍha
7.	The Mahāśrama gave to the Sūtradhara Sadāśiva Sāmanta-rāya Mahāpātra 3 krośa land extending from East to West in Laṅkapaḍā Biṣaya as a life-endowment with dakṣiṇā :	20 māḍha
8.	To the cooks (who had prepared the food) on the Mahot-sava :	20 māḍha
9.	For the śarbat offerings (paṇā-bhoga) to the Narasiṁha (Deva) of the Treasury (Bhaṇḍāracāḷi Narasiṁha) :	3 māḍha

* Open temple with a roof for the reception of the portable image, on the processional path of the Rathayātrā.

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10. On the ekādaśī day of Māgha śukla pakṣa the (remaining) śilpīs left and received as a parting gift : 17 bharaṇa
24 gauṇi
18 māḍha

11. On leaving the overseers with Vāsu Varman and others handed over their charges to Vidyādhara Paṭṭanāyaka, the Superintendent of stores.

I received :

māḍha	=	17
small māḍha	=	34
paddy	=	42 bharaṇa
muṅg dāl	=	8 puḍuga
clothes	=	8 bundles

This completes the list.

12. Today, in the 18th aṅka, on Māgha śukla ekādaśī I, Vidyādhara Paṭṭanāyaka, Baya Karaṇa (keeper of accounts) completed three copies of the accounts, as have been recorded by me, one for the Mahāśrama (to be kept) in the Puruṣottama Temple-Treasury, one for this (Padmakeśara) Temple-Treasury, and one for the Rupāsa Daḷabeherā as the Head of the Supervisors.

This is the record of expenditures (baya cakaḍā) for the construction of the Padmakeśara Ratha Deuḷa. All the gold came from the Mahāśrama's personal Treasury. The other things came from his country. These are the expenditures I have written down on the command of the Mahāśrama.

ŚRĪ ŚUBHAM ASTU

LEAF LXIX

1. From the Chowdvāra Fort came (*Ms. 2*) : 3840 māḍha
From the State Treasury the Mahāśrama gave personally on his visits : 34033 padma māḍha
The Suāsamalla Sānta sent from Veṅgigaḍa (Fort) :* 47038 aśrapi māḍha (oblong gold pieces)

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* May be Sahasramalla Paramarddi or the Sāmanta Dāsa Sahasramalla, in charge of the Dakṣiṇadeśa, the donor mentioned in Ins. no. 1118 of S.I.I. Vol. V.

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2. Candramaṇi Mahādevī sent :*	3708 māḍha
Pāṭamahādevī sent :	34033 elephant-marked coins
3. From general revenues the Chief Biśoi (Baḍa Biśoi) Gopīnātha Buḍhāleṅkā sent :**	73083 māḍha
4. The Superintendent Mahādeva Rājaguru Mahāpātra of the great temple of Puruṣottama sent :	3403 māḍha
From revenues from Biḍānasī Kaṭaka :	3404 māḍha
5. At the time of his coronation (1238 A.D.) the Mahāśrama had been weighed in gold for the first time. This he brought, coined as māḍhas :	134308 māḍha
6. From the bath of gold (kanaka snāna)*** at the time of his marriage :	8343 māḍha
7. Of the Sunyā presents from Gauḍadeśa (Bengal) in the 8th aṅka of his reign,**** he sent on three elephants, leaving aside the precious stones :	37030 aśrapi 7304 Bādshāh coins (baṅkāṭaṅkā)= (silver-coins) 7307 māḍha (weight of) unmarked silver-discs
8. During twelve years, ten months and fourteen days, from Bhādra to Bhādra, 10000 bharaṇa paddy were supplied annually from all the granaries of the Biṣayas (Districts) of the country. Of these immeasurable quantities of grains, what account can I give ?	
9. As presents from feudatary Chiefs (Sāmantas) an estimated 7,000 bharaṇa arrived every year. About this also, what account can I write ?	
10. In the granaries there were 24 people for measuring the grain, 28 people for storing it, 12 accounts-officers working under my charge, but even then it is difficult to give exact accounts of who did what in meeting victualling charges.	

* Might refer to Candrikā the wife of Paramarddi and sister of Narasiṁhadeva.

** Might be the stepbrother of Narasiṁhadeva mentiond in Leaf XIV, 3.

*** See Note on Leaf LXII, 9. The ornaments most probably were smelted into coins.

**** See Leaf XXXV, 9.

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11. Of the mountains of rice distributed from the Koṭhadeśa stores I have no accounts. Only the camp-accounts have been recorded.

12. Leaving these aside, what the Mahāśrama paid for his 24 portraits, from the Durgā-mādhava image at the start to the Ālapana portrait on the siṁhāsana at the end, is not known to me.

13. When the Suāsamalla visited the place in the Kārttika of the 13th aṅka, what he gave to the chief of the pathūriās I do not know. On that Kārttika Pūrṇimā day our Treasury received from him :* 3804 māḍha

14. Of the gifts in kind made by Rāṇī Kastūrikāmodinī I can form no estimate.

15. The Biśois of all the districts of the country sent annually on the first day of the year : 730 māḍha

16. This is a truthful record of the accounts of the pīṭha for a total period of 12 years, 10 months and 14 days. Dharma is my witness.

17. My grandfather Lakṣmaṇa Chiāu Karaṇa of Beṇṭapura village went to war with Anyaṅka Bhīma and died on the battlefield. My father Nidhi Paṭṭanāyaka went to war with Narasiṁha Deva, and died in Gauḍadeśa in the 8th aṅka.

18. While I have eaten the rice of the Mahāśrama in the past, and am doing so at present, and shall do so in the future, (trikāla=the three times), my black hair has become white. Assuming the office of a Superintendent of accounts (baya karaṇa) on the order of the Mahāśrama and supervising twelve accounts-officers (karaṇas) I have recorded these accounts and am putting my traditional signature to them.

19. I have received every year : 30 māḍha

I took my food at the mess of the overseers. For domestic expenses (of my family) I received monthly from the Puruṣottama kṣetra : 7 māḍha

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* Might be the Sāmanta Deo Saharamalla mentioned in note 1, Leaf LXIX, 1.

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20. Having performed this work truthfully and conscientiously (with Satya and Dharma) I have now been appointed Deputy Supervisor (Sāna Parichā) of the Sun-God (temple).

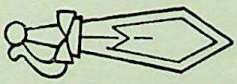
21. In the beginning during six years and three months the preparatory work was in the charge of the Chief Supervisor of the Puruṣottama kṣetra. Therefore I have no knowledge about it.

LEAF LXX

1. On Friday, the 4th day of Phālguṇa kṛṣṇa pakṣa in the 18th aṅka, Sāla era 665 (1258 A.D.) of the victorious prosperous reign of Vīraśrī Gajapati Gauḍeśvara Navakoṭi Karṇāṭa Kalavargeśvara Pratāpī Vīravara Mahārāja Lāṅgulā Narasiṁhadeva, Taḍau Vidyādhara Paṭṭanāyaka, the keeper of accounts made over his accounts and gave his signature, this flower :

2. This sign is the signature of the Superintendent Bhaṭṭa Nārāyaṇa Bhramarabara Sāmanta of Kīlā Bayāḷisabāṭi, who received it.

3. This sword is the signature of Bāuribandhu Daḷabeherā of Gaḍarupāsa Bārabhāga (12 parts or villages)



4. This circle is the signature of Śyāma Paṭṭanāyaka of the village Gaḍabeṇṭapura, the keeper of stores and accounts on the work-site and Officer-in-charge of the Royal Camp-Treasury (Śrīkaraṇa Padmakeśara Khaḷā Bhaṇḍārabaya karaṇa).

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5. Signature of Sadāśiva Sāntarā Mahāpātra Rājasūtradhara is this : (no sign or signature).

This (copy of the) accounts of Koṇārka is deposited with Rupāsa Daḷabeherā.

LEAF LXXI

The keeper of the Royal Seal (mudala-karaṇa) made a proclamation throughout Uḍrakhaṇḍa by the public herald (bhaṭṭa) and by the Chief of the army (Buḍhāleṅkā), which said :

Adorned with a train of ornamented cloth, appearing like the tail of the powerful Narasiṁha, the Protector of the people, the Upholder of Dharma (Dharmapāla), the fortunate Hero (Vīraśrī), endowed with prowess and all qualities (sakala-guṇa-parākrama), Narasiṁha Deva Mahārāja, Adhirāja, the Knower of Dharma (dharmajña), the Protector of all Dharmas (sakala-dharma-pāla), surrounded by Governors (Lokapālas), Provincial Administrators (Māṇḍa-likas), skilled śilpīs, adepts in the 64 Arts (catuṣṣaṣṭi-kalā-kalāpaka), attended by the people (prajā), the Ministers (amātya) and the Army (baḷa) expended one thousand times his weight in gold-coins, gained by the strength of his own arms, and uncounted thousands of grain-loads for erecting the Meru-Kailāsa, the Temple beloved of Sūrya crowned by rays (aṁśumālī) and famous in the three worlds (tribhuvana-vidita).

In the most auspicious time of his victorious prosperous reign the image of Mahābhāskara has been installed on Sunday (arkavāsara), the 7th day of Māgha śukla pakṣa, in Graha Dvīpa Candra Brahmā, Śaka era 1179 (1258 A.D.).

Note on dating.

The dates in Leaf LXX, 1 and at the end of the royal declaration in Leaf LXXI, yield both the year 1258 A.D. as the year of consecration of the Sun temple. But an alternate reading on Leaf LXIV would place the consecration in the year 1256-57 A.D. According to the Indian Ephemeris, Vol. IV by Swami Kanu Pillai, published by the Superintendent, Government Press, Madras 1922, the Māgha śukla saptamī day fell on a Sunday on January 13th 1258 A.D. This agreement between two of the entries in the Baya Cakaḍā and the astronomical calculations of the Ephemeris appear to clinch the issue of the consecration date of the temple in favour of 1258 A.D.

Now the generally accepted dates of Narasiṁha's reign are 1238 to 1264 A.D. Under the system of aṅka calculations explained before on Leaf I the 18th

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aṅka in which the consecration of the temple took place could not be later than between Sept. 1251 and Sept. 1252. This would leave only ten actual years for the construction of this gigantic monument, which appears next to impossible. It should, however, be noted that the chronology of the Orissan kings, including Narasiṁha Deva are still under discussion. This is primarily due to the difficulty in correctly reading and interpreting the ciphers or chronograms found in the ancient records, a difficulty also encountered in the present work. Therefore a final settlement of the chronology of Narasiṁha I is still an open question.

LEAF LXXII.

Colophon of Ms. 1.

These accounts that were with Rupāsa Daḷabeherā were copied by me in the 3rd aṅka of Rājā Dibya Siṁha Mahārāja, in the Śāla era 1266 (1859 A. D.) on the 14th day of Meṣa, on a Sunday.

True copy made by Madhu Dāsa Karaṇa, village Iñcogaḍa. Viriñci Nārāyaṇa Dharma Devatā is my witness !

If anybody steals this book he will go to Hell ! ŚRĪ ! ŚRĪ !

Note : Rājā Dibya Siṁhadeva was exiled by the British in 1876 according to Harekrushna Mahtab.

Colophon of Ms. 2

I have heard that this book (manuscript) of the Koṇārka temple accounts was first written by the Karaṇa of Rupāsa. There is another copy of the same belonging to Bṛndābana Candraparuṣi Mahāpātra of the Puruṣottama Baḍa Deuḷa, Chief of 36 nyogas (teams of paṇḍās), and Supervisor of the temple. This was copied by me, Uncle Nārāyaṇa Bhramarabara Mahāpātra of Kilā Bayāḷisabāṭi in the 18th aṅka of Mukunda Deva Mahārāja and of Sūryamaṇi Paṭamahādeī.*

This record of accounts, in the custody of Navaghaṇa Paṭṭanāyaka (Officer of the above Bṛndābana Candraparuṣi) was copied by me with the permission of the Chief Supervisor of the big Puruṣottama Deuḷa. My family members had all been Supervisors of the Padmakeśara and the Gaṅgeśvarī temples and were honoured everywhere as their Karaṇas (keepers of accounts and records.)

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* Sūryamaṇi Paṭamahādeī was the wife of Dibya Siṁhadeva and mother of Mukunda Deva Mahārāja. Dibya Siṁhadeva was Rājā from 1859–1877. He was a very strong character and opposed the British. So he was transported for life on a charge of murder. The 18th aṅka of Mukunda Deva would be about the year 1893.

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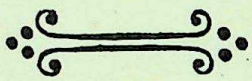
When the Firiṅgis broke the temple* we lost everything. The camphor evaporated and only the cloth remained (Orissan proverb meaning : the honour was gone and only the family remained).

This honour we had had for 28 generations, our activities are recorded in this book. No one will have this book. This book was kept in our house, but Collector Sahib sequestrated it.** After searching everywhere I found it in the big temple (Puruṣottama temple) and copied it, and I set our traditional symbol as signature to it.



(a rice-flower)

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* This may refer to an invasion of Orissa and desecration of the temple by the Muslims of Bengal under Kālāpāhāḍ, reported in fascicle No. 7 of Rājā Mukunda Deva (1551–1568 A. D.) in the Mādalā Pāñji, but is contradicted by a later entry of the Mādalā Pāñji, in fascicle No. 6 of Rājā Narasiṁha Deva of the Khurda Dynasty (1621–1647 A. D.), according to which the temple śikhara collapsed, when the great Gajasiṁha on the eastern side became loose and fell down. (See Introduction, para 12.)

** At that time, at the end of the 19 th century the British sequestrated all documents relating to private property and privileges.

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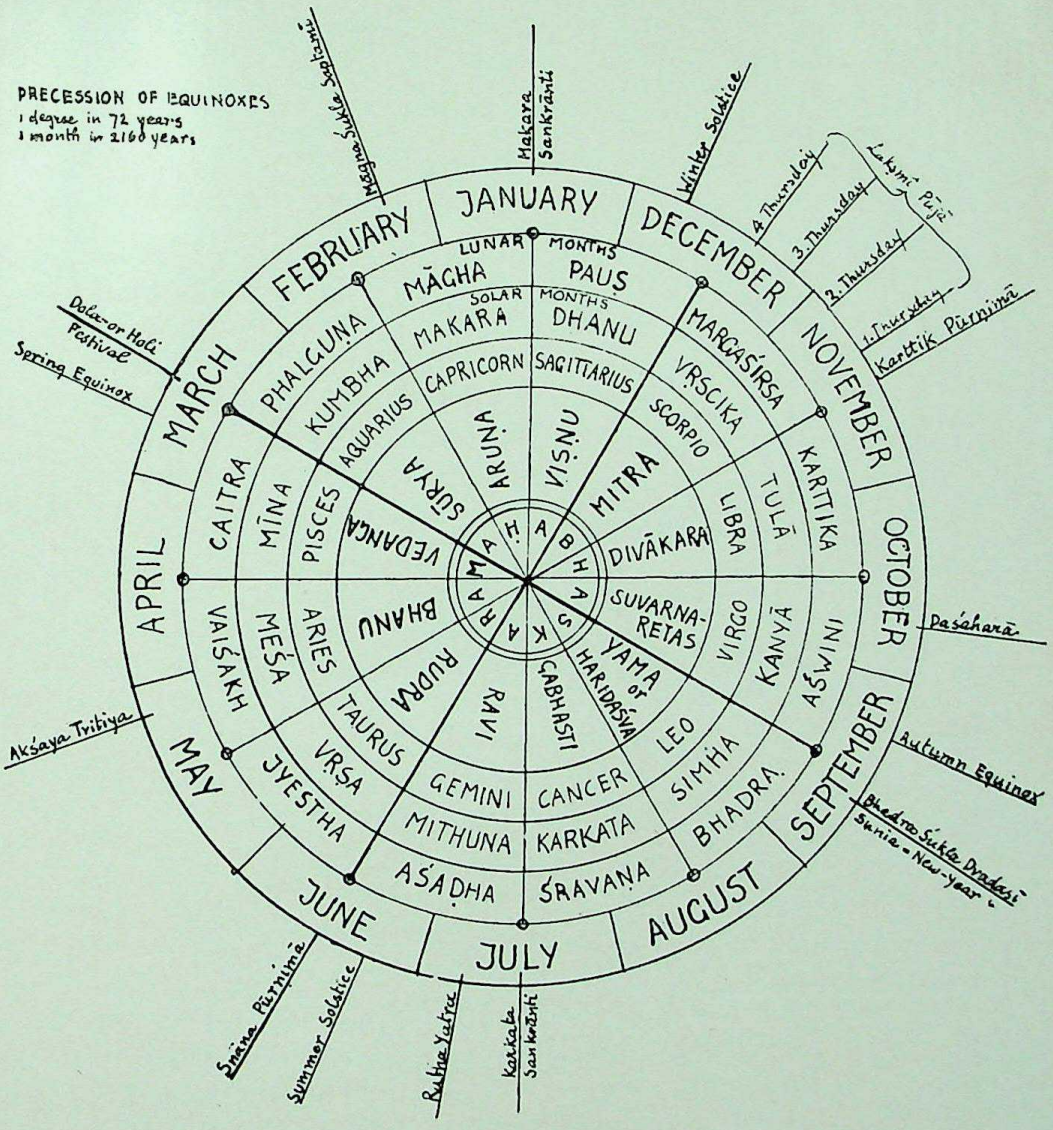

SCHEMATIC CHART OF CORRESPONDENCES BETWEEN INDIAN AND WESTERN CALENDARS
DATES OF ORISSAN FESTIVALS

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TENTATIVE CHRONOLOGY

OF

DATES AND WORKS

(RECORDED IN THE BAYA CAKAḌĀ)

		Ms. 1	*Ms. 2*
		7TH AṄKA	
LEAF I	Maṅgalaropaṇa Ceremony and distribution of charges by the Mahāśrama (Aug.—Sept.)	end 5th	end 5th
LEAF I, 1	10th day of Kanyā śukla pakṣa (Daśaharā, early October) : Ceremonial purification of the ground by the Rājaguru Bhuvaneśvara.	7th aṅka	6th aṅka
L. II, 3	10th day of Mṛgaśira śukla pakṣa (early November) : Measuring out the ground by Sūtradhara.		6th aṅka
L. III, 8	Laying out the groundplan of the temple with the thread by Sūtradhara, Gaṅgā Mahāpātra and Gadei Mahāpātra.	5th aṅka (writing mistake)	6th aṅka
L. III, 9	Pauṣa Pūrṇimā (middle January) : Recruitment of people for the construction of the temple and for the army by Dāma Baḍajenā.		6th aṅka
L. III, 11	Makara Saṅkrānti (end January) : Delivery of 354 cartloads of timber by the wood-suppliers of the whole area. (No date for 3 months)		
L. IV, 14	On the 2nd day of Meṣa śukla pakṣa (Vaiśākha) (end April) : Beginning building up the base (pīṭha).	7th aṅka	7th aṅka
L. IV, 18	14th day of Vṛṣa (Jyeṣṭha) (end May) : Balaśrī Jhaladhara Deva Rāja came to inspect the works and paid gratuities.		
L. IV, 30	On the 1st day of Mithuna (middle June) : Workmen let off for the rainy season and paid.	7th aṅka	7th aṅka

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		7TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. V, 1	Saṅkrānti of Karkaṭa (end July) : Presents arrived from Ratha Siṁha, brought by his brother.		
	(No date for 2 months)		
		8 TH AṄKA	
L. V, 12	On the 1st day of Kanyā (middle September) : Śilpīs returned to work after rainy season.		
L. V, 13	On the 10th day of Kanyā śukla pakṣa (early October) : The Mahāśrama came to inspect the works.		
L. VI, 4	On the 8th day of Kārttika śukla pakṣa (early November) : Arrival of 60382 stones from Jagadala Hill.		
L. VI, 29	On the 9th day of Kārttika śukla pakṣa (early November) : Some śilpīs came from Khurdagaḍa to cut laterite stones.		8th aṅka
	(No date for 4 months)		
L. VII, 14	On the 17th day of Kumbha (early March) : Wall of pīṭha was finished and pillars for the interior of the mukhaśālā were brought up.	8th aṅka	8th aṅka
L. VII, 22	On 24th day of Kumbha (middle January) : Four muguni stone-pillars set up in the mukhaśālā and bali offered to them.		
L. VII, 25	On the 4th day of Mīna (Caitra) (end of March) : Lime-stone was filled in the cavities of the pillars after the mukhaśālā plinth had been finished.		
	(No date for 4 months, rainy season)		
L. VIII, 9	On the 4th day of Karkaṭa (end of July) : 700 stones arrive on cāpas.	8th aṅka	8th aṅka
L. VIII, 15	On the 7th day of Siṁha (Bhādra) (end of August) : Work on the base finished and pathuriās paid.		

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		8TH AŃKA (contd.)	
		Ms. 1	*Ms. 2*
L. VIII, 20	On the 12th day of Bhādra (New-Year) (first half September) : Sūtradhara went to the Sunyā ceremony in Puruṣottama.		9th aṅka
		9 TH AŃKA	
	(No date for $4\frac{1}{2}$ months)		
L. VIII, 23	Makara Saṅkrānti (end January) : While Mahāśrama went to war in Bengal, Suāsamalla Baḍajenā came to inspect the works.	8th aṅka	9th aṅka
L. VIII. 25	Kumbha Saṅkrānti (end February) : Pīṭhas of the niśā-temples terminated.		
L. IX, 13	On the 14th day of Mīna (end March) : Sūtradhara and Gadādhara arranged the stones for the dvārabandha (doorframe).		
L. IX, 21	On the 3rd day of Meṣa (Vaiśākha) (middle April) : Scaffolding for the front-wall finished.	9th aṅka	9th aṅka
L. X, 1	On the 14th day of Meṣa, on a Wednesday (end April) : Presents arrived from Mahāśrama's fatherin-law, brought by Sāmanta Purudha Virūpākṣa Śarmā.		
L. X, 5 & 6	On the 10th day of Vṛṣa (Jyeṣṭha) (end May) : Scaffolding on south side of the temple paid for. On same day Sūtradhara refused to accept the work of the Madurai śilpīs, who went on hunger-strike.		
L. X, 13	On 7th day of Mithuna (Āṣāḍha) (end June) : Madurai śilpīs paid for creeper-work.		
L. XI, 7	On 2nd day of Karkaṭa (Śrāvaṇa) (middle July) : Beginning of iron-casting with a bhāṭī pūjā.		9th aṅka

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		9TH AŃKA (contd.)	
		Ms. 1	*Ms. 2*
L. XI, 13	On beginning of rainy season (Cāturmāsya) (July) : Work was stopped, and only boatmen and people carrying stones retained.		
L. XII, 14	On 10th day of Karkaṭa (end July or early August) : A cyclone brought down the scaffolding on western side.		
		11 TH AŃKA	
L. XII, 17	On the 12th day of Bhādra śukla pakṣa (Sunyā) (early September) : Viśi Mahāpātra sent an image of the Mahāśrama as a present.	11th aṅka	11th aṅka
L. XII, 20	From 11th day of Kanyā kṛṣṇa pakṣa to 5th day of Kanyā śukla pakṣa : (middle Sept—early October) pathuriās from all sides returned to work.		
L. XIII, 9	On 5th day of Tulā (early October) : Wall-work was finished and on removing part of the scaffolding religious food-offerings (mauḷa-pūjā) were made.	11th aṅka (this aṅka)	11th aṅka
L. XIV, 3 & 4	On the 18th and 19th day of Tulā (early November) (śukla pakṣa ?) : One Navagraha stone was hauled up and set on the iron beams above the portal in presence of Balaśrī and Gopīnātha Deva (step-brother of the Mahāśrama)	12th aṅka	11th aṅka
L. XIII, 11	On the 24th day of Tulā (śukla pakṣa ?) (middle November) : The big Pārśva Devatās were set up in the niśā temples.		
L. XV, 5	On the 5th day of Dhanu (Pauṣa kṛṣṇa ?) (late November) : Starting the construction of the pīḍha roofs of the mukhaśālā.	12th aṅka	12th aṅka

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		11TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. XV, 7	On the 8th day of Makara (Māgha) kṣṇa pakṣa (end January) : Six tiers of the first pīḍha had been set on the mukhaśālā.		
L. XV, 8	On the 20th day of Makara (śukla pakṣa ?) (early February) : Stones were brought for the wall-portion (barati) above the pīḍhas.		
L. XVI, 4	On the 3rd day of Kumbha (after middle February) : Scaffoldings for setting up the kanyā-figures (above the pīḍhas) were finished on all four sides.		
L. XVI, 9	On the 30th day of Kumbha (middle March) : Temporary stone pillars set up to support the pīḍha-roof.		12th aṅka
L. XVI, 11	On the 6th day of Mīna (second half March) : Beginning hauling Kanyā figures on the roof.		
L. XVI, 16	15th day of Mīna (beginning of April) : Payment for setting images on the roof.	12th aṅka (this aṅka)	11th aṅka
L. XVII, 16	On 3rd day of Meṣa (end April) : Anuratha śikharas were completed. Contract given to Gaṅgā Mahāpātra for making Dikpāla images of 1 hasta.		
L. XVII, 2	Ratha-yātrā in Puruṣottama (July)	12 TH AṄKA	
L. XVII, 5	On Sunyā day (Bhādra śukla dvādaśī (first half September) : The Mahāśrama was absent and presents of the camp were given to the Sūtradhara.	12th aṅka	
L. XVII, 11	On Āśvina śukla daśamī (early Oct.) : Astrapūjā.		
L. XVII, 23	On the (last) Thursday of Mṛgaśira (Lakṣmī Pūjā) (early December) : 103 śilpīs left for their villages and received clearance.		

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		12TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. XVIII, 2 & 3	On the 7th day of Māgha śukla pakṣa (late January) : Mahāśrama came to inspect the works. From the 5th day work was suspended for preparing his reception.		
L. XVIII, 4– L. XIX, 9	On the 13th day of Māgha śukla pakṣa (end January) : The big lion was hauled up and reached the roof of the mukhaśālā in the presence of Mahāśrama.		
L. XIX, 11– L. XX, 5	On the 14th day of Māgha śukla pakṣa (end January) : The big lion was set into the śikhara and the wall above it was closed.	12th aṅka	
L. XX, 6	On the 7th day of Phālguna kṛṣṇa pakṣa (late February) : Reward to people who had hauled up stones for the ceiling by śikā-chekā-chandā.		
L. XX, 10	On the 10th day of Phālguna śukla pakṣa (early March) : Dola Festival (Holi) with distribution of red powder.		
L. XXII, 1	On the 6th day of Caitra (śukla ?) (end March or early April) : 103 sāṅgi-people carried the stones for the koṇaka.		
L. XXI, 11	On Caitra śukla navamī (ninth day) (early April) : The first ceiling of the śikhara was completed by Rāghava Mahāraṇā of Ekāmrakaṭaka.		12th aṅka
L. XXI, 14	On the 12th day of Caitra (middle April) : 9378 āśrapis were brought from Sāraṅga-gaḍa Treasury.	12th aṅka	
L. XXII, 3 & 5	On the 3rd day of Vaiśākha (Akṣaya tṛtīyā) (second half April) : Anuratha śikharas had been completed. After terminating the garbha, the viṣama with elephant frieze was set up.		14th aṅka

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12TH AṄKA (contd.)

		Ms. 1	*Ms. 2*
L. XXII, 9	On Jyeṣṭha Pūrṇimā (Snāna Yātrā) (end May) : The Mahāśrama was expected, but did not come.		
L. XXII, 17	On the 8th day of Śrāvaṇa śukla pakṣa (end July) : A boat with one large muguni stone failed to arrive. The pilot was fined.		
L. XXII, 20	From the 13th day of Śrāvaṇa śukla to the 13th day of Bhādra śukla pakṣa (middle August to middle September) : Two śilpīs kept haviṣya while carving the vajramuṇḍis on the śikhara and pūjās were offered.	12th aṅka	

13TH AṄKA

(First part of the year no dates.)

L. XXIII, 5	On Dola Pūrṇimā (Holi) (middle March) : Work was stopped and a Community-feast arranged.		
L. XXIV, 2	On the 10th day of Caitra (kṛṣṇa ?) (end March) : Quarrel broke out between workmen, work stopped. Consultations among overseers.		
L. XXIV, 10	On the 6th day of Caitra (Mīna) (śukla ?) (early April) : Pandits explained position of the 12 Ādityas (inside the mukhaśālā ?).		
L. XXIV, 11	On the 3rd day of Vaiśākha śukla pakṣa (Akṣaya tṛtīya) (early May) : Sūtradhara measured out the figure of Mahābhāskara for the Pūjā-image on a stone placed below the Arkavaṭa and a Homa sacrifice was performed.		
L. XXIV, 12	On the 2nd day of Vṛṣa (Jyeṣṭha) (Second half May) : Śaṅkarānanda Svāmī from Puruṣottama came to see the works.		
L. XXIII, 11	On the 6th day of Vṛṣa (end May) : Balaśrī paid gratuities to 14 sculptors.		

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		13TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. XXVI, 4	On the 3rd day of Mithuna (second half June) : Mundali and āmalakī of mukhaśālā finished.	13th aṅka ?	
L. XXVI, 11	On the 3rd day of Karkaṭa (second half July) : Clearance to workmen who had carried stones during rainy season.		
L. XXV, 6-11	On the 4th day of Karkaṭa (second half July) : Accounts received of the stone-quarriers who had worked during the 11th aṅka.		13th aṅka
L. XXX, 2	On the 4th day of Bhādra (middle August) : One elephant died.		
L. XXIX, 1 (Ms. 2)	On Bhādra śukla daśamī (early September) : the Auditor checked the records of supplies.		
		14TH AṄKA	
L. XXVII, 4	On Sunyā day (Bhādra śukla dvādaśī= mid-September) : Inspector and Auditor came to make an inventory of stores and treasury.		
L. XXX, 4	On Sunyā day Viśvanātha Mahāpātra sent an image to Puruṣottama as presentation.		14th aṅka
L. XXXIII, 5	On 3rd day of Kanyā (Āśvina late Sept.) : Testing of floor-levels of garbha and mukhaśālā.	14th aṅka	14th aṅka
L. XXXI, 8	On the 10th day of Kanyā śukla pakṣa (early October) : Roof of the śikhara covered with stone slabs.		
L. XXXI, 13	On the 10th day of Kanyā śukla pakṣa (Daśaharā) : Pūjā on the muṇḍi pathara (ceiling stone) was performed.		
L. XXXI, 13	On the 13th day of Kanyā śukla pakṣa (early October) : The ceiling stone was taken in circumambulation around the temple and then set on the roof.		

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		14TH AŃKA (contd.)	
		Ms. 1	*Ms. 2*
L. XXX, 7	On the 5th day of Tulā kṛṣṇa pakṣa (second half October) : 230 śilpīs returning to work were lodged in the Rupāsa camp.		
L. XXXII, 4	On the 9th day of Tulā (Kārttika) (late October) : Metal given for making the utsava mūrtis (portable images).		
L. XXXIV, 9	On the 9th day of Tulā (Kārttika) (late October) : Departure of prominent people who had come on a visit.		
L. XXXIV, 7	On the 10th day of Tulā (late October) : Some kārigars received payment for additional labour.		
L. XXXV, 1, 2	On Kārttika (Tulā) śukla ekādaśī (middle November) : Letter from the Mahāśrama and arrival of Rāṇī Sītā Devī with her Rājaguru.		
L. XXX, 10	On 12th day of Tulā (Kārttika) (middle November) : Payment to 11 śilpīs for 5 hasta of the garbha.		14th aṅka
L. XXXV, 6	Kārttika Pūrṇimā (last day of Kārttika) (middle November) : Settlement of dues to Pathuriās who had prepared the stones for the pīḍhas.	14th aṅka	14th aṅka
L. XXXIII, 10	Mṛgaśīrṣa 1. thursday Lakṣmīpūjā (second half November) : Payment to 46 śilpīs.		
L. XXXIV, 4	On the 3rd day of Mṛgaśīrṣa (second half November) : Excavation was started of the foundations for the Siddheśvarī Mahādevī temple.		

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14TH AṄKA (contd.)

		Ms. 1	*Ms. 2*
L. XXXV, 8	On the 8th day of Mṛgaśira kṛṣṇa pakṣa (end November) : Balaśrī presented silken cloths to sculptors who had made and set up muguni images on the anurathas.		
L. XXXV, 9	On the 11th day of Mṛgaśira śukla pakṣa (mid-December) : Gold-coins and other war-booty got in the fight against Nawab of Nakhaur arrived at night.	Śāla 662 (1255 A.D.)	Śāla 652 (1245 A.D.)
L. XXXVI, 3	On Śivarātri day (Phālguna amāvasyā) (end February) : Govinda Mahāraṇā delivered an image of Sūrya-Śiva.		
L. XXXVI, 19	On Dola Pūrṇimā (Holi Festival) (Middle March) : Buying red powder.		
L. XXXVII, 3	On the 14th day of Caitra (kṛṣṇa pakṣa) (end March) : Work on the garbha was stopped and śilpīs put to sculpture work.		14th aṅka
L. XXXVII, 10	On the 9th day of Caitra śukla pakṣa (Middle April) : The Aruṇa-pillar was brought to be set up.		
L. XXXVIII, 11	On Akṣaya tṛtīyā (3rd day of śukla Vaiśakha) (end April) : Luggage and letter of Mahāśrama arrived.		
L. XXXIX, 7 & 8	On the 26th day of Vaiśākha (śukla) (Middle May) : Mahāśrama received the śilpīs who brought presents and declared to them, that by the 10th day of the 10th month of the 10th year the roof of the temple must be completed.		
L. XL, 9	On the 6th day of Jyeṣṭha śukla pakṣa (early June) : Contract given to 23 pathuriās to build up the Raṅgapīṭha.		

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		14TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. XL, 8	On Jyeṣṭha Pūrṇimā (Snāna Pūrṇimā) (Middle June) : Prasāda for the Mahāśrama was brought from Puroṣottama.		
		15TH AṄKA	
L. XLI, 1	On the Pūrṇimā day of Siṁha (Middle Sept.) : Pūjā to the Beki Bhairavas before lifting them into the śikhara.		15th aṅka
L. XLI, 9	On the 10th day of Kanyā śukla pakṣa (Daśaharā, beginning October) : Fine chisel work on siṁhāsana finished by Gaṅgā Mahāpātra.		
L. XLI, 16	On the 13th day of Kārttika kṛṣṇa pakṣa (end October) : The lotus-shaped khapuri set on the muṇḍipathara.	17th aṅka or (writing mistake)	15th aṅka
	(No dates for 2½ months)		
L. XLI, 21	On Pauṣa Pūrṇimā (middle January) : An image of Puṣya-abhiṣeka ceremony of the Rājā set up on the mukhaśālā (anuratha ?)	15th aṅka	15th aṅka
	(No dates for 5½ months)		
L. XLII, 6	On the 2nd day of Āṣāḍha śukla pakṣa (end June) : Mahāśrama returned to Puruṣottama for the Ratha-Yātrā and the ceremonial sweeping of the chariot.		
L. XLII, 4	On the 1st day of Karkaṭa (middle July) : 44 pathuriās returned home.		
	(The 15th aṅka is very incomplete and moreover is mentioned in Ms. 1 as 17th aṅka. On the other hand the 17th aṅka is rather long)		

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14TH AṄKA (contd.)

		Ms. 1	*Ms. 2*
L. XXXV, 8	On the 8th day of Mṛgaśira kṛṣṇa pakṣa (end November) : Balaśrī presented silken cloths to sculptors who had made and set up muguni images on the anurathas.		
L. XXXV, 9	On the 11th day of Mṛgaśira śukla pakṣa (mid-December) : Gold-coins and other war-booty got in the fight against Nawab of Nakhaur arrived at night.	Sāla 662 (1255 A.D.)	Sāla 652 (1245 A.D.)
L. XXXVI, 3	On Śivarātri day (Phālguna amāvasyā) (end February) : Govinda Mahāraṇā delivered an image of Sūrya-Śiva.		
L. XXXVI, 19	On Dola Pūrṇimā (Holi Festival) (Middle March) : Buying red powder.		
L. XXXVII, 3	On the 14th day of Caitra (kṛṣṇa pakṣa) (end March) : Work on the garbha was stopped and śilpīs put to sculpture work.		14th aṅka
L. XXXVII, 10	On the 9th day of Caitra śukla pakṣa (Middle April) : The Aruṇa-pillar was brought to be set up.		
L. XXXVIII, 11	On Akṣaya tṛtīyā (3rd day of śukla Vaiśakha) (end April) : Luggage and letter of Mahāśrama arrived.		
L. XXXIX, 7 & 8	On the 26th day of Vaiśākha (śukla) (Middle May) : Mahāśrama received the śilpīs who brought presents and declared to them, that by the 10th day of the 10th month of the 10th year the roof of the temple must be completed.		
L. XL, 9	On the 6th day of Jyeṣṭha śukla pakṣa (early June) : Contract given to 23 pathuriās to build up the Raṅgapīṭha.		

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		14TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. XL, 8	On Jyeṣṭha Pūrṇimā (Snāna Pūrṇimā) (Middle June) : Prasāda for the Mahāśrama was brought from Puroṣottama.		
		15TH AṄKA	
L. XLI, 1	On the Pūrṇimā day of Siṁha (Middle Sept.) : Pūjā to the Beki Bhaìravas before lifting them into the śikhara.		15th aṅka
L. XLI, 9	On the 10th day of Kanyā śukla pakṣa (Daśaharā, beginning October) : Fine chisel work on siṁhāsana finished by Gaṅgā Mahāpātra.		
L. XLI, 16	On the 13th day of Kārttika kṛṣṇa pakṣa (end October) : The lotus-shaped khapuri set on the muṇḍipathara.	17th aṅka or (writing mistake)	15th aṅka
	(No dates for $2\frac{1}{2}$ months)		
L. XLI, 21	On Pauṣa Pūrṇimā (middle January) : An image of Puṣya-abhiṣeka ceremony of the Rājā set up on the mukhaśālā (anuratha ?)	15th aṅka	15th aṅka
	(No dates for $5\frac{1}{2}$ months)		
L. XLII, 6	On the 2nd day of Āṣāḍha śukla pakṣa (end June) : Mahāśrama returned to Puruṣottama for the Ratha-Yātrā and the ceremonial sweeping of the chariot.		
L. XLII, 4	On the 1st day of Karkaṭa (middle July) : 44 pathuriās returned home.		
	(The 15th aṅka is very incomplete and moreover is mentioned in Ms. 1 as 17th aṅka. On the other hand the 17th aṅka is rather long)		

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		Ms. 1	*Ms. 2*
		17TH AŃKA	
L. XLIII, 4	On the 12th day of Bhādra śukla pakṣa (Sunyā day) (towards mid September) : Viśvanātha Mahāpātra presented an image representing a royal procession.		17th aṅka
L. XLIII, 8	On the 5th day of Āśvina (Kanyā) (end September) : Mahāśrama came with an escort party.		
L. XLIII, 10	On the 10th day of Kanyā (Āśvina) kṛṣṇa pakṣa (Daśaharā) (early October) : Ceremonial setting up of the kalaśa of the mukhaśālā.		
L. XLIV, 13	On last Thursday of Mṛgaśira (before mid December) : The lotus-emblem was inserted with its stalk into the kalaśa of the mukhaśālā with a big ceremony.		
L. XLV, 11	On the 7th day of Pauṣa kṛṣṇa pakṣa (end December) : Nārāyaṇa Mahāpātra finished setting up the seven horses before the mukhaśālā.		
L. XLV, 13	On the 4th day of Pauṣa śukla pakṣa (middle January) : 40 persons received a contract for laying the floor of the mukhaśālā with stone slabs within three months.		
L. XLVI, 1	On the 13th day of Māgha kṛṣṇa pakṣa (end January) : Sūtradhara and Rājaguru directed the levelling of the mukhaśālā floor.		
L. XLIX, 6	On Dola Pūrnimā (Holi) (middle March) : Wall of Ṭhākurāṇī temple was completed.		17th aṅka
L. XLIX, 9	On Caitra Maṅgalavāra (Tuesday) (end March) : Overseer distributed dāl to the śilpīs.		

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17TH AṄKA (contd.)

		Ms. 1	*Ms. 2*
L. XLIX, 13	On the 8th day of Vaiśākha kṛṣṇa pakṣa (end April) : Twelve people from Puruṣottama came for a sacrifice.		
L. XLIX, 14	On Akṣaya tṛtīyā (3rd day of Vaiśākha śukla pakṣa) (early May) : the Yajña began at the appointed place on northern side.		17th aṅka
L. XLVII, 10	On Vaiśākha śukla pakṣa (early June) : A lion should have been set up on the garbha, but Gaṅgā Mahāpātra had not returned to direct the work.		
L. L. 4	On Śītala ṣaṣṭhī, 6th day of Jyeṣṭha śukla pakṣa (early June) : Mahāśrama was expected, but did not come.		
L. L, 5	On the 13th day of Jyeṣṭha śukla pakṣa (middle June) : Kalaśa of big temple was taken on top of khapuri.		
L. L, 6	On the 14th day of Jyeṣṭha śukla pakṣa (middle June) : Sūtradhara and Gadādhara went on top to fix the lower part of the kalaśa.		
L L, 7	On the 2nd day of Āṣāḍha (second half June) : The kalaśa could not be properly fixed on the garbha. Sūtradhara in despair left and sent a letter to the Mahāśrama.		
L. L, 8	From the 3rd day of Āṣāḍha (second half June) : Work on the main temple was stopped. Only Gaṅgā and Nārāyaṇa continued to work.		
L. L, 9	On the 11th day of Āṣāḍha kṛṣṇa pakṣa (end June) : Balaśrī brought the Chief Supervisor of the Puruṣottama temple and Kāśi Rājaguru.		

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17TH AṄKA (contd.)

	Ms. 1	*Ms. 2*
L. LII. 19	On the 13th day of Āṣāḍha kṛṣṇa pakṣa (trayodaśī) (end June) : Remuneration to Gaṅgā Mahāpātra for work on the egārupaṭṭika set up by Dharma Mahāpātra.	
L LV, 1	On the 5th day of Āṣāḍha śukla pakṣa (early July) : Scaffolding set up for building wall of Bandāpana maṇḍapa.	
L. LI. 12, 13	On the 11th day of Āṣāḍha śukla pakṣa ekādaśī (middle July) : Mahāśrama arrived with Rājaguru, and Dharma Mahāpātra returned to his village during the night.	
L. LI, 14	On the 12th day (of Āṣāḍha śukla pakṣa) (middle July) : The upper part of the kalaśa was carried by 12 workers on top of the temple. It was fixed in one day with due ceremonies.	
L. LV, 9	On Āṣāḍha Pūrṇimā (middle July) : Lions were set up at the eastern Lion-gate.	
L. LV, 13	On the 6th day of Śrāvaṇa (second half July) : Three images fixed in the lower shrines of the niśā-temples.	
L. LV, 19	On the 11th day of Śrāvaṇa (end July) : Remuneration to Gaṅgā Mahāpātra for supervising kaṅgula work.	
L. LV, 22	On the 13th day of Śrāvaṇa kṛṣṇa pakṣa (end July) : Ceiling of Ṭhākurāṇī temple completed.	
L. LVI, 2	On the 5th day of Śrāvaṇa śukla pakṣa (early August) : Contract given for supplying 240 dancing figures for Bandāpana maṇḍapa within three months.	

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17TH AŃKA (contd.)

		Ms. 1	*Ms. 2*
L. LVI, 7	On the 8th day of Bhādra kṛṣṇa pakṣa (end August) : Starting to set pīḍha roofs on Bandāpana maṇḍapa.		

18TH AŃKA

L. LVII, 3	On new-Year (12th Bhādra śukla pakṣa) (early September) : Gaṅgā Mahāpātra presented a small stone-elephant at the Sunyā Ceremony.	18th aṅka	18th aṅka
L. LVII, 6	On the 8th day of Āśvina kṛṣṇa pakṣa (late September) : People who had worked during rainy season were given leave, on Mahāśrama's order.		
L. LVIII, 7	On the 11th day of Āśvina kṛṣṇa pakṣa (end September) : Delivery to the Sūtradhara of the Bandāpana maṇḍapa padmapiṇḍi and alasrī.		
L. LVIII, 12	On the 10th day of Āśvina śukla pakṣa (Daśaharā) (middle October) : Work was stopped and a feast given to the śilpīs.		
L. LVII, 7	On the 13th day of Āśvina śukla pakṣa (middle October) : For roofing the Ṭhākurāṇī temple gaṇḍi, the team of Gadādhara Mahapātra received payment.		
L. LIX, 9	On the 5th day of Kārttika (second half October) : The Deuḷi camp was closed.		
L. LX, 14	On the 10th day of Kārttika śukla pakṣa (mid November) : Rājaguru Bhuvaneśvara and Ānanda Ratha came to give measurements for the halls for sacrifice.	18th aṅka	18th aṅka

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		18TH AṄKA (contd.)	
		Ms. 1	*Ms. 2*
L. LX, 26	On the fullmoon day of Kārttika (middle November) : The pūjā image was taken from the house of the Sūtradhara to the Garbhādhāna śālā for consecration.		
L. LIII, 9	On Pauṣa pūrṇimā Mahāśrama came with Rājaguru Bhuvaneśvara.		
L. LXXI	On the 7th day of Māgha śukla pakṣa (early February) in Graha, Dvīpa, Candra, Brahmā : The pūjā image was installed in the garbhagṛha, on a Sunday.	Śaka 1179 18th aṅka 1258 A.D.	
L. LXIV, 2	On the 11th day of Māgha śukla pakṣa (early February) in Vasuapa, Candra, Brahma : The first pūjā with Ravi Nārāyaṇa Bandāpana began and Mahāśrama placed his first donation before the image.	18th aṅka Śaka 1178 1257 A.D. or 1258 A.D. ?	18th aṅka
L. LXVIII, 10	On the 11th day of Māgha śukla pakṣa (early February) : The remaining śilpīs left.		
L. LXVIII, 12	On the 11th day of Māgha śukla pakṣa (early February) : Vidyādhara Paṭṭanāyaka, the Keeper of accounts, completed three copies of the accounts.	18th aṅka	
L. LXIV, 10	On the 1st day of Phālguṇa kṛṣṇa pakṣa (second half February) : Mahāśrama with his retinue left after the consecration of the temple.		
L. LXX, 1	On the 4th day of Phālguṇa kṛṣṇa pakṣa (second half February) : Tadau Vidyādhara Paṭṭanāyaka made over his accounts and gave his signature (a flower).	18th aṅka Śāla 665= 1258 A.D.	

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MANUSCRIPT No. 4

THE PADMAKEŚARA DEULA KARMĀṄGI

(Extracts from the text on the Ritual of the Padmakeśara Temple)

Of this text two copies have been found, one in the Naṭeśvara Gādi under the Arkavaṭa, the sacred Sun Tree near the Koṇārka temple, and the other in the Balarāma temple in Ayurbaṅga.

The text begins with the mention of the names of the persons who instituted the ritual. They are the same as those mentioned in the Baya Cakaḍā as the founders and patrons of the temple : first of all the Paramamāheśvara, Paramavaiṣṇava, Paramabhaṭṭāraka, Paramasaura Mahāpratāpī, Vijaya Mahāsāmanta, Mahāśrama, Kṣatriya-kula-Dhūmaketu, Laṅgula Narasiṁha Deva; then the Paṭamahādevī Sītādevī Ṭhākurāṇī (the Rājā's second wife); the two Rājagurus Sandhivigrāhaka Viśvanātha Mahāpātra and Bhuvaneśvara Mahāpātra; Vidyādhara Brahmā, Īśāna Bhaṭṭa Bhogika, Bhramadhara and other officers.

The daily ritual was very elaborate, beginning before sunrise and ending only after sunset. The big statue of Mahābhāskara, the main object of worship, was hidden in the darkness of the inner shrine and could not be moved out. Therefore two small standing bronze images of the Sun God, called utsava mūrti or vijaya mūrti served as mediators between this image and the Sun God in heaven. Of these portable images, the smaller was used for the daily functions in the temple, but when it was taken out on its yearly car-procession, the bigger portable image took its place inside the temple.*

Every day before sunrise the smaller bronze image was placed in the centre of the Nāṭamandira, and as soon as the first rays of the sun fell on it, it was worshipped with five food offerings (pañcopacāra) and with lights (ārati). Then it was taken in a procession down the stairs of the Nāṭamandira and up the stair-way of the big temple, and placed on a lion throne (siṁhāsana) in the sanctum. The cloth which had at night covered the big image of Mahābhāskara was removed. The image was ceremoniously bathed with curds, scented oil and water and rubbed with sandal paste. Then it was draped in silk of orange colour, garlanded with flowers and crowned with a headdress of flowers. When the morning five food offerings were brought from the kitchen, the main part was placed in front of the big image and the rest in front of the portable image. Half of these offerings were afterwards taken outside and presented to the Nine planets (Navagrahas) above the

* See Pl. 109.

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portals and to Siddha Mahāmāyā Devī in the Mahāgāyatrī temple. The remainder was taken to the small brick temple of Nārāyaṇa at the south-western end of the compound* and sold to the public. Out of the proceeds new provisions were bought.

Between 9 and 10 A.M. a bigger pūjā with food offerings of sixteen articles (ṣoḍaśopacāra pūjā) was presented to the Mahābhāskara image. Of these offerings part went to the Mahāśrama, when he was present, or, in his absence, to the chief Supervisor. The chief pūjārī then came out into the compound and offered oblations to the four Pārśva-devatās : to Aruṇa on the pillar in front of the entrance, to Mitra, Vaivasvata-Pūṣan and to Haridaśva in the niśā temples, and finally also to the particular aspect of the Sun God in that month, represented by one particular pair of wheels.** Afterwards the musicians appeared, sat down on their platform in front of the eastern portal and played the appropriate tunes (melodies), while the priest removed the garments and flower ornaments from the main image, replaced them with two white Kenduli cloths and offered fresh flowers and camphor.

At the midday service another big food offering of sixteen articles was made to the main divinity. The portable image was taken back to the Nāṭamandira, where light (ārati) was offered to it three times, as well as to the sun in the zenith. The chief priest also took offerings to the Mahāmāyā temple and to the Parayātrā pūjā maṇḍapa on the north side of the compound. On this circuit he offered pūjā with five articles to the Seasons, the Year, the river Candrabhāga, the Ocean, the Mountain, the seven Days of the week, the fifteen Days of the bright fortnight and the fifteen Days of the dark fortnight, the Brahmagāyatrī and the Navagrahas. After that the portable image was again taken back to the main temple.

For the evening service the big image of Mahābhāskara was draped in a silken Paṭani cloth of orange colour with a chequer pattern and adorned with a golden crown, four golden necklaces, a golden belt and two golden wristlets. This was done before sunset. The portable image was taken out again to the Nāṭamandira and after being seated on a simhāsana in the form of a ḍamaru above the double stairs on the western side, a white umbrella was held above its head. The priest with a lamp of many wicks in hand performed ārati in front of the image and of the setting sun, with offerings of curds, sugar and flowers. Three silver trumpets were blown, after which the dance of the Māhārī (temple dancer) began in the Nāṭamandira to the accompaniment of drums (mardala). While the dance was being performed, a small couch decorated with gems was placed in front of the main image in the big shrine. Under a ceremonial parasol and accompanied by trumpets and gongs the portable image was taken there and placed to rest on the couch, while

* Also called Beḍha Nārāyaṇa or Mādhava Maṇḍapa.
** See App. No. 18.

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ārati was offered once again. At the end of all ceremonies the head of the big Sun God was covered with a cloth, the doors of the temple were closed and sealed for the night. When the priest next morning came to open the temple he had to carefully examine the seal, whether it had not been broken or tampered with, and then the portable image was taken out to the Nāṭamandira.

On Sundays the sunset bandāpana was performed earlier, and the small image, placed on a palanquin was taken in circumambulation around the temple before being put to rest. On that evening a pūjā with ten offerings (daśopacāra pūjā) was also performed in front of the Devī Mahāgāyatrī. A lamp was lit in front of the sacred Sun Tree (Arkavaṭa) where prayers were spoken for the Rājā. Such is a condensed account of the daily temple services.

Besides these, however, special functions were held at festivals throughout the year. Some were those common to all temples, but others were exclusively dedicated to the Sun God. We shall confine ourselves to the description of only these latter ones.

The most important among these, and the one which still lives in the hearts of the people and every year attracts thousands of pilgrims from near and far, was on the Māgha śukla saptamī day,* when the Sun in its northern course stands in the Agnikoṇa, the south-eastern space direction. This is considered to be the birthday of the Sun God, and the pilgrims even today, collecting in huge crowds on the banks of the ocean, offer prayers to the Sun God, when he arises from the waters. In those days however, when the temple was in worship, the celebrations began already on the fifth day of the month. On that day the garland from the neck of the Sun God was offered to Mukteśvara, an image of Śiva under the Arkavaṭa, the sacred Sun Tree. This image was then taken down to the Candrabhāga river, lustrated and offered pūjā. On the sixth day in the evening the processional chariot was brought before the Lion-gate at the entrance of the compound and there consecrated by the Rājaguru, the Brāhmaṇa and the Ācārya with a garland from the main image (Ājñā(na)-mālā). On that day the bigger bronze image had been placed in the main shrine on a pedestal with a halo (prabhā) behind it, while the smaller image was being prepared for the car-procession (rathayātrā). First it was taken in a palanquin from one portal to the other of the temple, and in front of each propitiatory rites (maṅgalāropaṇa) were made, in the form of small offerings from a tray held by another priest, concluding with long prostrations (aṣṭāṅgapraṇāma). On this circuit Nakṣatra bandāpana was offered also to the great wheels along the basement of the temple which represent the signs of the Zodiac. All this was done at night, and only when one watch of the night was left the small image was carried with all royal insignia to the processional chariot. There it received pūjā with sixteen offerings,

* mentioned in the Brahma-purāṇa.

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and then the Sevakas (minor Brāhmaṇas) with 21 lamps in hand would await the emergence of the Sun God from the ocean side, to greet him at its first appearance with the performance of ārati. After that the chariot with the utsava mūrti started on its journey. The Rājā was expected to perform the ritual functions on the chariot, but, if he could not be present, the Rājaguru acted on his behalf and was entitled to receive the garland from the main divinity, as well as the khadi prasāda, the sacred cloth sent from the image of Jagannāṭha in Purī.

The car-procession went through the main road (baḍadaṇḍa) with umbrellas, flywhisks and other paraphernalia towards the Guṇḍicā temple.* After halting at the house of the Sāmanta Īśāna Bhaṭṭa to receive worship, it reached there two watches before night. At the Guṇḍicā temple it received ablutions with water from the Candrabhāga river and the usual evening offerings. Then the retiring ceremonies were held in the same way as in the big temple. The image apparently remained there for three days, because only on the tenth day of the month, after a propitiatory ceremony (maṅgalāropaṇa) the chariot was turned round to the west, and after having received bandāpana offerings, started on its home journey. On reaching the Lion-gate, the image was again placed on a palanquin and brought to the Nāṭamaṇḍapa for the usual food-offerings and the dance performance. Finally it was taken back to the main temple, where the day concluded with the customary retiring ceremonies.

Observances particular to solar worship were also the monthly celebrations of the Saṅkrānti, marking the passage of the Sun from one constellation to the other. Of these the Capricorn (Makara) and the Cancer (Karkaṭa) saṅkrānti were the most important and elaborate. On these occasions new garments were offered to the deities.

One very great festival was the Sāmba daśamī pūjā, on the tenth day of Pauṣa śukla pakṣa, on which the penance and sacrifice of Sāmba were celebrated under the Arkavaṭa. Praises and invocations were addressed to Sāmba, and all the food offerings made to the Sun God were afterwards presented to him, while mantras were recited for both of them. After the midday offerings the worship of the various images in the temple compound was undertaken. The chief cook brought 108 cakes made from pulses (baḍā) on a tray, and the pujārī offered them, beginning from the eastern portal : to the nine planets, to the Nāgarājas, to Mahālakṣmī and Yogeśvara, to Aruṇa, Sūrya's charioteer, to Chāyā, Māyā, Uṣas, Rātri or Sandhyā, the Devīs surrounding Sūrya. All these are most probably the small images on the friezes above the portals. Then the horses drawing the chariot of Sūrya were worship-

* Its situation is not exactly known, but must have been towards the east near the shore of the ocean and the mouth of the Candrabhāga river.

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ped along the base of the stairways, and equally the Ghaṇṭākarṇa Bhairavas*, the benign and wrathful Protectors of the temple above the portals. The Constellations, represented by the wheels along the base of the temple were worshipped, beginning from the southern side. In the lower of the two shrines of the southern niśā-temple Ravi Nārāyaṇa was worshipped, and the great Pārśva-Deva Mitra in the upper shrine. In the western niśā-temple Rudra-Sūrya received worship in the lower and Vaivasvata (Pūṣan) in the upper shrine. In the northern niśā-temple Vedāṅga was worshipped in the lower and Haridaśva in the upper shrine.** After this circumambulation of the temple and the worship of all images, the pujārīs went to the Beḍha Nārāyaṇa maṇḍapa and to the Ṭhākurāṇī (Mahāgāyatrī) temple, where they offered pūjā to Siddhacaṇḍī Devī with the Brahmagāyatrī mantra, and also to Chāyā and Māyā, the two Śaktis of Sūrya. The Ācāryas of Vedapura then had to perform a Homa sacrifice with 108 mantras and with rice offerings (bali) to the ten directions of space with their ten guardians (Dikpālas). The pujārīs now went out of the temple compound to worship Naṭeśvara, the Lord of Dance (Śiva) under the Arkavaṭa. Coming back by the Lion-gate, they made offerings to Jaya, Vijaya, Pauṇḍra and the Aṅgirasas.*** Finally the Saura-Agni (the fire produced by the sunrays caught through a thick glass or crystal) was lit, to be kept alive during one full year. In the kitchen building Gaṇeśa was offered pūjā, and after worshipping also the Kāmakala (mithuna ?) images, the pujārīs in the evening returned to the Bandāpana maṇḍapa.

As was natural for a Sun temple, solar and lunar eclipses were occasions for special sacrifices. At the start of an eclipse the Sun God in the main temple was bathed and given new raiments. The portable image was brought under the Arkavaṭa and a Varuṇa pūjā**** performed on a kalaśa filled with water. During the whole time of the eclipse the Rājaguru had to conduct an expiatory Homa sacrifice with 108 repetitions of Vedic mantras to the Sun God, nine mantras for the Navagrahas and other mantras for the Days (tithis) and for the Constellations. One of the Sūrya mantras was :

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* See App. No. 12.

** In the text on Architecture the devas in the lower shrines are respectively called Kṣetrapāla in the southern, Hāra-Sūrya in the western and Dharmamūrti in the northern shrine. See Leaf XII-B.

*** Jaya and Vijaya are generlly placed at the foot of the doorjambs as the victorious guardians of the temple. Aṅgirasas=one of the seven Ṛṣis or one of the ten Prajāpatis, the progenitors of mankind, author of many vedic hymns, sometimes identified with Agni.

**** Varuṇa, the dark counterpart of Sūrya was probably on this occasion invoked to release its grip on the bright shining aspect of Sūrya, and expiatory rites had to be performed in order to avert calamities.

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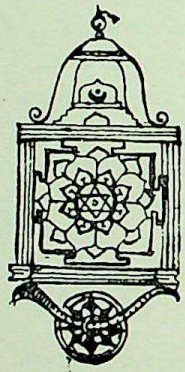
"OM ! Circulating across the dark firmament, quickening the Immortals and the mortals, Savitā Deva borne on his golden chariot beholds the three worlds !"

(Ṛgveda I. 35, 2, White Yajur Veda, XXXIII, 43 and XXXIV, 31)*

Should the Rājaguru not be available, the priests of Vedapura could conduct these ceremonies. The rice purified by the mantras was taken to the Rājā wherever he was at the time, and he received it by placing it on his head.

In lunar eclipses the bathing ceremony of Siddha Mahāmāyā was performed at night in her own temple and food offerings were made to her and to the Navagrahas above her portal.



During Durgā pūjā in the month of Āśvina the Devī Mahāmāyā received special worship on a ratha-yantra placed in her temple—a yantra in the form of a one-wheeled chariot with an axle in form of a snake. (See Fig. above) This yantra was taken in procession with the portable image of the Devī to the Mādhava temple in the south-western corner, and here a bandāpana was performed for Durgā and Mādhava.** Big ceremonies were meanwhile held in the main temple and in the Bandāpana maṇḍapa. In the evening after the worship of the Sun God a consecrated cloth and camphor were offered to the image of the Rājā on the pedestal. Should the Rājā be present at that time, the offerings were made to him in person. On the Vijayā Daśamī, the last day of Durgā pūjā, a procession from Gaḍa-Rupāsa was led to the temple by the chief Supervisor, and he received the Ājñā(na)-mālā on that day. Standing on the circular steps of the eastern portal, he had to offer new silken cloth to all the temple-attendants, old and new.

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* Ākṛṣṇena rajasā vartamāno niveśayannamṛtaṃ martyaṃ ca I
Hiraṇyayena Savitā rathena devo yāti bhuvanāni paśyan II

** Two images of the Rājā worshipping Durgā-Mādhava are in the Koṇārka Museum and one in the National Museum, New Delhi, (see Pl. 52). This image represents the pūjā which the Rājā performed most probably at the beginning of building operations, as mentioned in Mādalā Pāñji.

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These are just a few of the numerous festivals celebrated throughout the year. In the text the rituals pertaining to each of them are described at great length. Also the offerings that had to be made on every occasion, the type of flowers, of ornaments and cloths for the Sun God, the incense, food and sweets presented to him are enumerated in every detail. We come to know all those who had to organize the functions, the astrologers who had to fix the dates of the various festivals and the special duties of those who participated in the various ceremonies. A whole army of people was employed in the service of the temple : purohitas and pujārīs, paṇḍās and sevakas, providers of stores, caretakers of cloths and jewellery pertaining to the Sun God, then puṣpālakas, who made the flower ornaments, jalabaḍus, who provided sacred waters for the ablutions, umbrella bearers, palanquin- and torch-bearers, carpenters who made the chariots for the yearly car-procession, decorators of the chariot and those who made the flywhisks and trasas, the ceremonial emblems, the potters who made the lamps, the temple–and the kitchen-cleaners. For each one not only the duties, but also the emoluments and gratifications are mentioned, besides in certain cases, special rights and privileges Most temple servants had their daily allowance of food and sweets, some had yearly remunerations in form of money or in the enjoyment of the produce of certain areas of cultivated land, which varied according to the status and importance of the person.

All this would require a detailed and specialized study, which, however, could not be included in a book dealing mainly with the architecture and the history of the temple. For showing the pomp and grandeur of its ritual suffice it to mention the note at the end of the Karmāṅgī text which says : "In the reign of Anaṅgabhīma (Father of Narasiṁha I) the expenditure on Maghā saptamī and on Pauṣa Daśamī (Sāmba) pūjās had been 1200 māḍha*, but Narasiṁha Deva, in the 18th aṅka of his reign, after building the great temple, increased the fund to 4231 māḍha."

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* This must have been in the small temple for the Sun God built by Purandara Keśarī.

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APPENDICES

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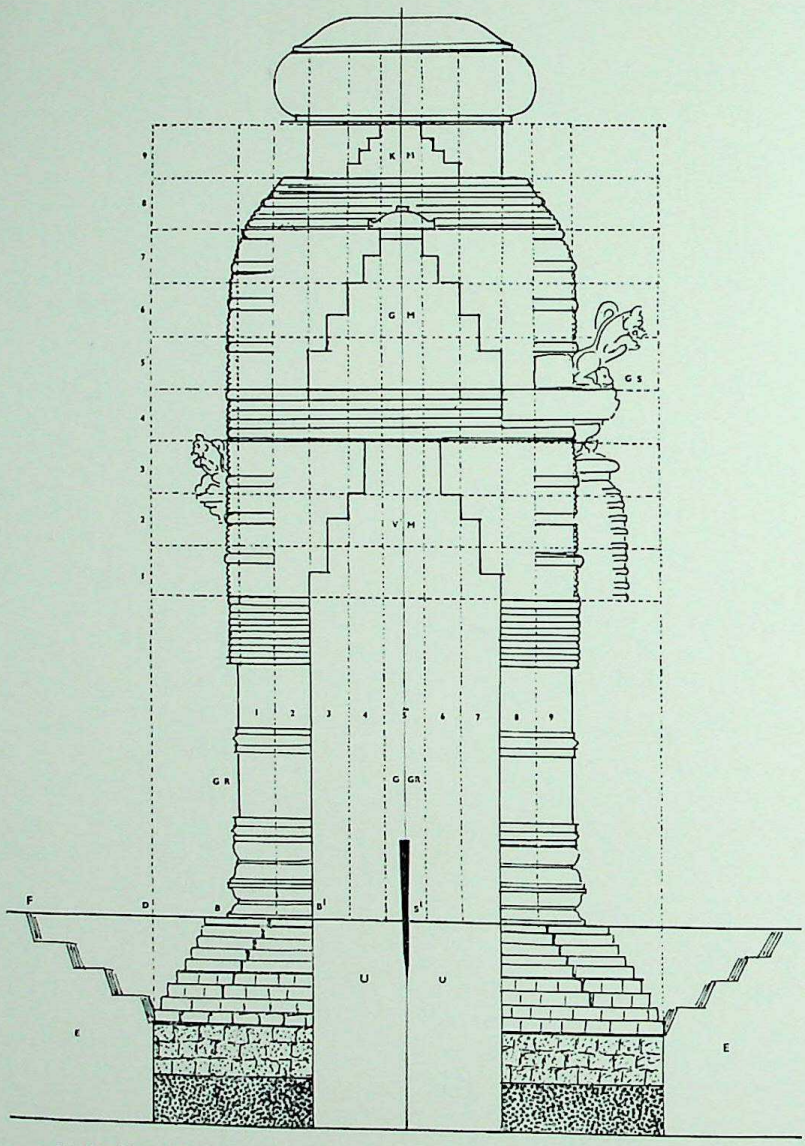

FOUNDATIONS (App. No. 1)

U=Ucchiṣṭhāṁśa
S'=S'aṅku
G Gr=Garbhagṛha
G R=Garbharekhā
B B'=Depth of wall
F B'=Limits of excavation
D D'=Depth of excavation
E=Earth

Below ground

1. Layer=coarse grained sand
2. Layer=rough stones
3. Layer=tuff-stone, in form of stairs
4. Layer=Solid stone of the building both in bhadra form
5. Layer=cover of particularly strong and Flawless stones

ROOFING THE TEMPLE (App. No. 6)

VM=Vajramudraka
GM=Garbhamudrā
KM=Kaṇṭhamudraka
Ch S=Chatraśilā
V=Viṣama
B=Beki
A=Amalaka
GS=Gajasiṁha

Fig. 1

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Baya Cakaḍā, Leaf 1 and II

LAYING OF FOUNDATION, according to Silpasāriṇī.

The laying of foundations should always be started in an auspicious moment, an auspicious time and day. First the ground should be cleaned and levelled, then measured out with the thread, on a site either square or rectangular, as required by the temple. By tracing two diagonals the centre of the site should be found and there the śaṅku of wood or bamboo should be inserted. After ascertaining the height of the temple, the thickness of the wall should be fixed at one eighth of the temple's height. Then the outline of the temple (the garbha-rekhā) should be traced on the ground, after which the excavatioon can be undertaken. Beginning from outside at a distance of one third of the temple's height, it should be dug in a slant from all four sides. After every three hasta it should have a level step on which scaffoldings can be set. The digging should not go further than the central part of the garbha, the auspicious "ucchiṣṭāṁśa", neither above nor below. As the building of the foundation progresses, the excavation is gradually filled up again. The foundation is built up in four layers of equal height. The lowest consists of coarse-grained sand, and the second of rough stones. These two layers are bound up with the earth into which they are sunk. The third layer is made of maṅkaḍa (tuff) stones, in form of stairs in the lower part, and in bhadra form, following the outline of the temple, in the upper part. Only the fourth layer is built with the solid stone of the building and consolidated with mortar. It should be finished evenly with a cover of particularly strong and flawless stones, forming the head of the foundation which should be set in an auspicious time. On this uppermost layer the base of the temple can be set. This base is on all four sides in recess of two (or one) muṣṭi from the outer limit of the foundation. Never should metal be used for securing the stones of the foundation.

(The depth of the foundation is not mentioned here, but modern sthapatis say, that it should be from one third to one fourth of the height of the temple.)

See Fig. 1.

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Text on the Architecture of the Padmakesara Temple L. 5 A, 6 A, 8 B, 10 B
Baya Cakaḍā, L. III. 7

SAURABHADRAPĪṬHA

Saurabhadrapīṭha corresponds to what in the Śilpasāriṇī is designated with the generic name of Sarvatobhadra Samapīṭha or Mahāpraśasta garbha and mukhaśālā. It is the biggest type of temple, a pañcaratha temple with three niśā-maṇḍapas (side-shrines). The groundplan is given under the caption of Sūrya-vallabha Prāsāda (the temple loved by Sūrya). It is laid out on a grid of 22 parts in width and 44 parts in length. The divisions of the grid determine the units of measurement (mūlasūtras).

The vimāna occupies a square of 12 units, the depth of the uncarved wall is of three units, of three and a half with the projecting carved parts. The inner room, the garbhagṛha is a square of six units. On the outer surface four units are for the rāhā, the two middle parts being indented to give room for the niches of the Pārśva devatās occupying one unit, two units are for the anarthas and two on the sides for the koṇakas. Of these the corner part is plain, only vertically indented with two recesses, the inner half is carved with mouldings like the anuratha. The niśā-temples occupy six units with their outer volume and have four parts for their inner rooms. They have rāhās of two units with projecting pillars and portals, one anuratha of one unit and a koṇaka of one unit.

The door part of the garbhagṛha has two units in width. The passage towards the mukhaśālā is on even level for three units in length, then there is a toraṇa and after that steps in half moon form descending to and ending two units before the mukhaśālā.

The mukhaśālā is a square of 18 units outer measurement and of 12 units inner measurement. The depth of the wall has three units. Four pillars one unit square and two units from the wall, support the roof. Portals are made on all three outer sides and with frames are two units in width, the projecting alasa baḍas flanking the portals are three units apart and are one and a half unit broad. The entire rāhā has thus six units, the two anarthas with their pratirathas have two units each, the virāla garbhas have each one unit and the koṇakas have each one unit, indented with vertical recesses.

Fig. 2 a and 2 b

(See also Introduction, para 10 : The Architecture of Koṇārka)

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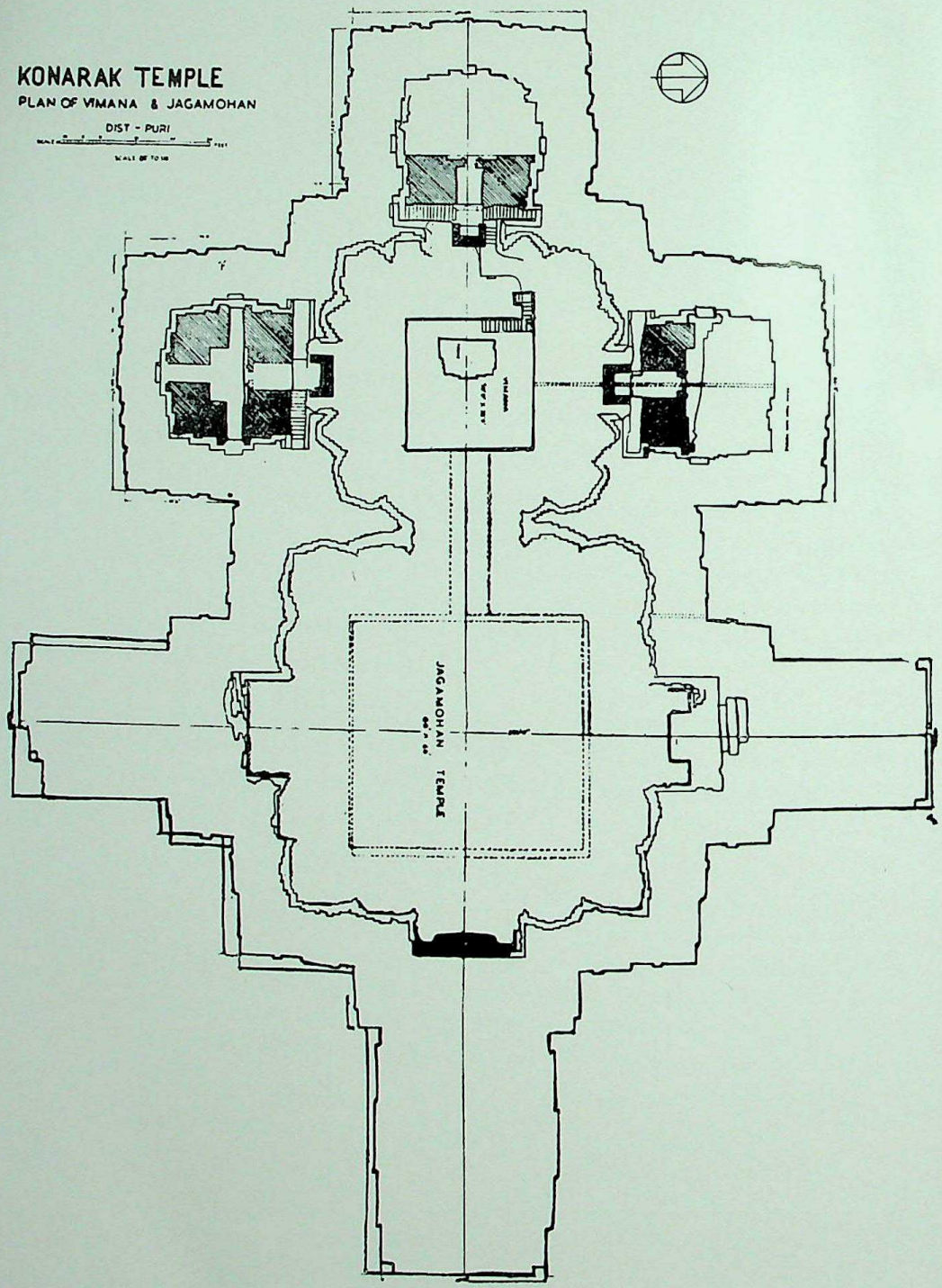

Fig. 2, a. Groundplan of the Koṇārka Temple acc. to the Archaeological Survey of India

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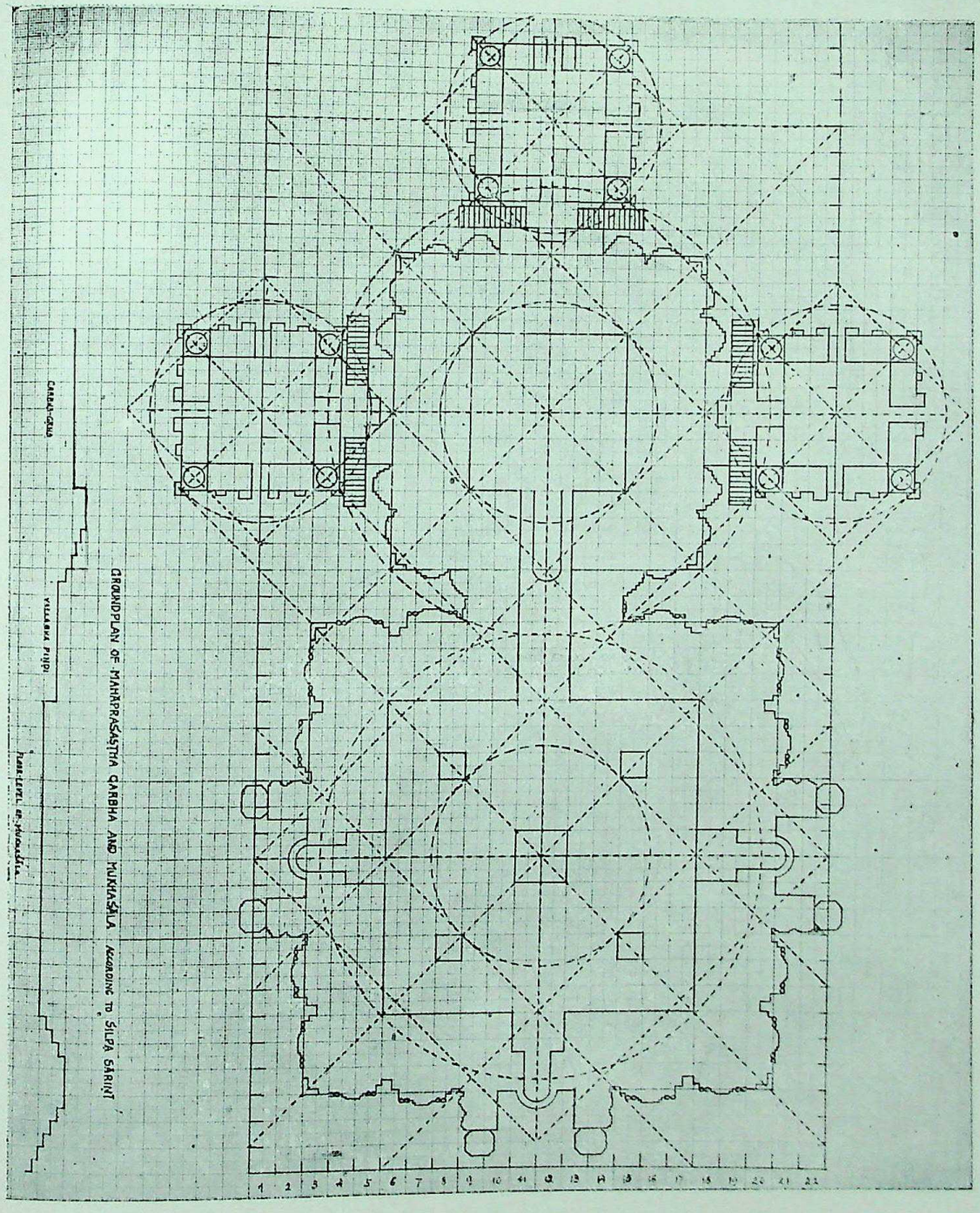

Fig. 2, b. Saurabhadrapīṭha acc. to Śilpasāriṇi

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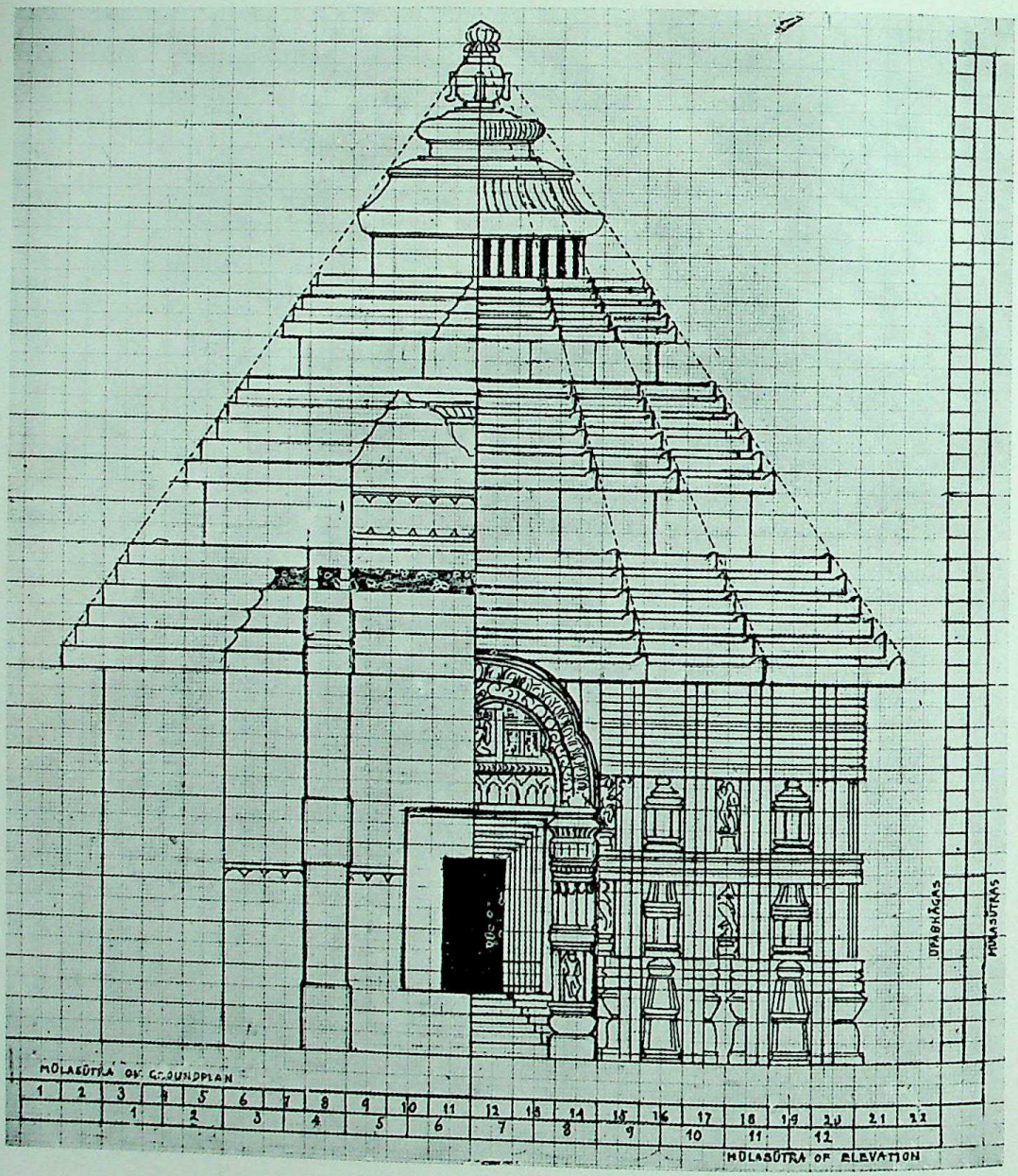

Fig. 2, c. Elevation of the Mukhasālā acc. to Śilpasāriṇī

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ELEVATION OF THE MAHĀPRAŚASTA MUKHAŚĀLĀ

According to the Śilpasāriṇī the elevation of the mukhaśālā is based on a mūlasūtra which has three upabhāgas (subdivisions), while the groundplan is based on a mūlasūtra of two upabhāgas. Taking the upabhāgas of both to be of the same size, the mūlasūtra of the elevation will be $1\frac{1}{2}$ times the size of that of the groundplan. Thus both the schemes can be reduced to a common denominator of one upabhāga and no discrepancy is between the two. 18 mūlasūtras of the groundplan would be 12 mūlasūtras of the elevation. They have a different and alternating rhythm, but at every significant limit, where one form-complex changes into another, they fall into line.

The drawing here given is made in its outlines according to the description in the Śilpasāriṇī, with a few amendments in those measurements that are in contradiction with those of the groundplan and with the features of the actual building, and thus appear to be simple writing mistakes of the copyist. The sculptural decorations are taken from photos of the building, the arch above the portal from fragments lying about in the grounds, the pillar supporting it from the design in the text on Architecture. Fig. 2, c

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* See Introduction, para 10 : The Architecture of Koṇārka and paper with detailed descriptions and analysis of both groundplan and elevation, presented by Alice Boner at the Seminar on Indian Temple Architecture, held in the American Academy of Benares, 17–21. Nov. 1967.

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Introduction, para 10 and Text on the Architecture of the Padmakeśaratemple, L. 10–18 A, L. 10–14 B

ELEVATION OF THE MAHĀKAILĀSA ŚIKHARA, according to Śilpasāriṇī (abridged)

Here the mūlasūtra is fixed according to the height of the plinth of which it is the third part. The pañcakarma above it (khura, kumbha, kaṇi, bhūmi, vasanta) has five such parts, and so has the lower jaṅgha. A bandhana of two mūlasūtras divides it from the upper jaṅgha, which is equally of five mūlasūtras. From here starts the śikhara with a bandhana covering five parts and made up of ten horizontal bhūmis. The koṇaka has ten divisions in height, made up of five bhūmis and one āmalakī each, covering together thirty mūlasūtras. The viṣama covers only one part and the beki with the lions and Bhairavas four. The āmalaka with the upper and lower dhara is five mūlasūtras high, the khapuri has three mūlasūtras and the kalaśa with the pedestal has five. Thus the entire vimāna is 73 mūlasūtras high and consists of twelve main divisions. This is called a pañcaratha prāsāda on account of its five vertical divisions. While the koṇaka consists of equal horizontal elements, the anartha has four or five anartha śikharas called rathakas of diminishing size, one above the other. The rāhā, also consisting of equal horizontal elements, has a niśā-temple in front reaching to the limit of the upper bandhana. Above this is a vajramuṇḍi carved on the wall, six mūlasūtras high, on the south, the west and the north side. These are crowned by lions of four mūlasūtras jutting out from the walls. On the eastern side a small śikhara is addorsed to the wall of the large śikhara and above it a gajasiṁha of six mūlasūtras is projecting from the wall. Fig. 2, d

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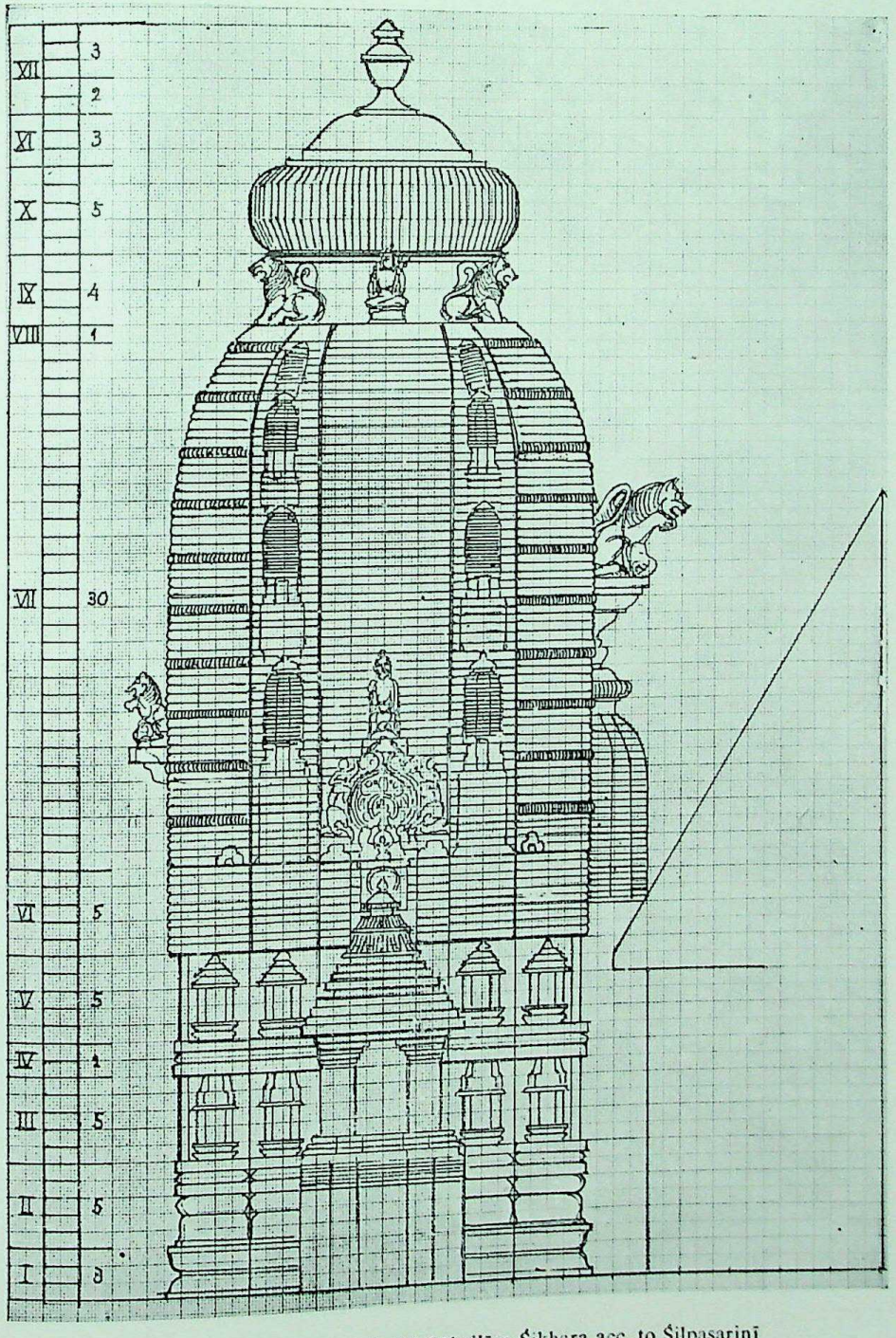

Fig. 2, d. Elevation of the Mahākailāsa Śikhara acc. to Śilpasariṇī

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SAURABHADRAMAṆḌALA from Maṇḍala Sarvasva.

A square bhūmi has to be divided into six parts in both directions,
this will produce 36 parts for the Sūrya yantra. 1

The outer sides have to be divided lengthwise in two,
in both these divisions the bhūpura is made. 2

In half-part, as usual, the neck of the bhūpura is made,
then on the diminished, narrow side-parts 3

Four corners in form of broad ears are added.
Within the four (remaining) parts the garbha is traced. 4

In the centre the Saura-bindu is placed and over it a triangle,
over that a hexagon and then three circles. 5

On an eight-petalled lotus the Ādityas and on a twelve-petalled lotus the Ravi-gaṇas are invoked,

They are worshipped with their bījas and with red sandal-paste. 6

Āditya, Savitā, Bhānu, Ravi, Sūrya, Divākara,
Mārtaṇḍa, Tāpana are worshipped on the eight petals. 7

From Aruṇa to Viṣṇu the Lords of the months are worshipped as Gaṇas
on the twelve petals of the lotus and Bhāskara in the centre. 8

Sūrya, the Lord of the southern and northern course (Ayanādhipati)
has Aruṇa on its eastern side, and then in regular order 9

Pūṣan at the back (west), Mitra on the right side (south)
and Haritpati on the left (north). 10

Who worships Sūrya and others on this maṇḍala with he bhūpura
is sure to go to the abode of Sūrya (Sūrya-loka). 11

The Sūrya-maṇḍala is drawn with rice of five colours.

The main divinity (pīṭhadeva) is worshipped with the planets and the
guardians of the quarters (Dikpālas). Fig. 3 a 12

(On this yantra the garbhagṛha of the Sun Temple is built.)

SAURAPAÑCĀBJA MAṆḌALA from Maṇḍala Sarvasva.

This Saurapañcābja Maṇḍala is greatly loved by Sūrya,
it is made for the worship of Sūrya together with four other devatās. 1

For this yantra a square has to be made with divisions and subdivisions,
so that the whole field will be divided into 25 parts. 2

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SŪRYA PAÑCABJA MAṆḌALA
or
SAURA PAÑCĀBJA MAṆḌALA
Fig. 3 b

MAHĀ SŪRYA YANTRA
or
BHĀSKARA BHADRA YANTRA
or
SAURA BHADRA MAṆḌALA
Fig. 3 a

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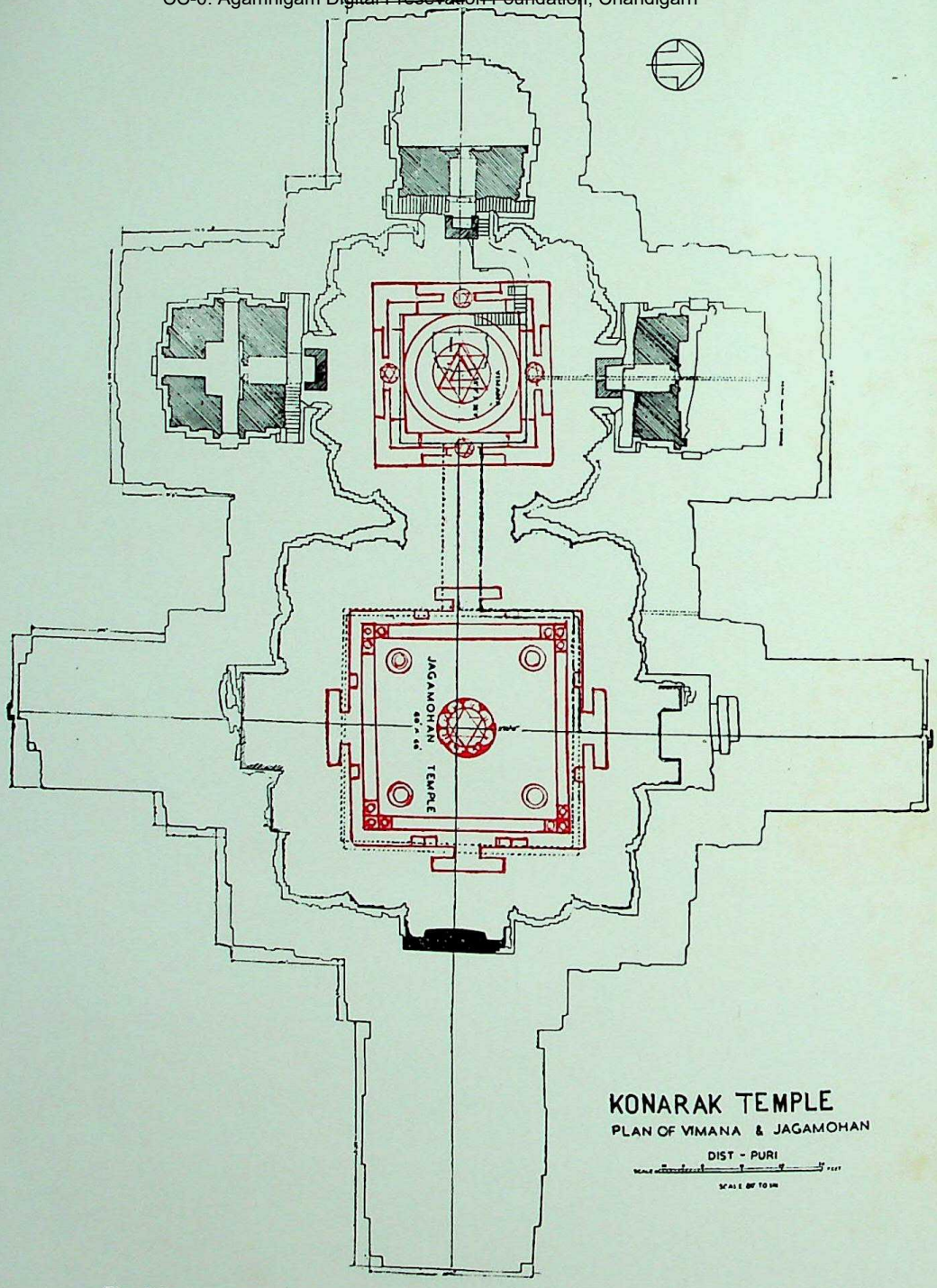

Fig. 3 b

black : Groundplan acc. to Archaeological Survey of India.
red : Yantras underlying Garbha and Mukhaśālā.

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By tracing two diagonals the centre-point is found.

Around the centre a circle with eight sectors has to be drawn not exceeding the size of the central division. 3

The lotus in the centre is eight-petalled, in the corners there are twelve-petalled lotuses. 4

Now I shall explain other particulars of this yantra :

In the centre of this yantra is a bindu, and a hexagram inside the circle with an eight-petalled lotus. 5

On the South-side Gaṇeśa and Rudra, on the North-side Ambikā and Viṣṇu should be worshipped (on the small padmas). 6

Then, leaving half a part of the outer square, a square is made with a karṇikā (ear) in every corner. In these karṇikās three bindus have to be made. 7

Two are on the outer sides and one in the centre. On these three bindus the Sūrya Śaktis are worshipped. 8

In the Agni corner (south-east) Dīptā, Sūkṣmā and Jayā, in the Nairṛtya corner (south-west) Vijayā, Bhadrā and Ūṣmā. 9

In the Vāyu corner (north-west) Tīkṣṇā, Vegā and Pracaṇḍā, in the Īśāna corner (north-east) Tāpinī, Svarṇāṁśu and Akṣakārikā. 10

These have to be worshipped with the bīja HRĪṂ, with flowers, scent and rice they have to be worshipped. 11

Again, in half the part of the remaining square, the corners are left as they are, and in one section by their side 12

The Dikpālas have to be worshipped. On all four sides the bhūpura has projecting parts like portals. 13

The Dikpālas are worshipped with their mantras in their proper places.

Only by the side of the front Brahmā and Ananta have also to be worshipped. 14

Sūrya pūjū is done in the centre with Chāyā and Māyā. 15

The Smārtas worship the five Devatās on this place.

HRĪṂ bīja is for Sūrya, KLĪṂ bīja for Viṣṇu, GUṂ for Gaṇeśa, ŚRĪ bīja is for Ambikā, Rudra is worshipped with the Rudra-mantra by the Smārtas. 16

When a hall is built for a sacrifice to Sūrya (yajña) it has to be built according to this yantra, including all the four circles, with an altar (vedikā) in the centre. 17

By doing Sūrya pūjā on this yantra great merit is acquired. This pūjā can also be performed on a design (aṅkana), this is called the Saurapañcābja maṇḍala. 18

Fig. 3, b

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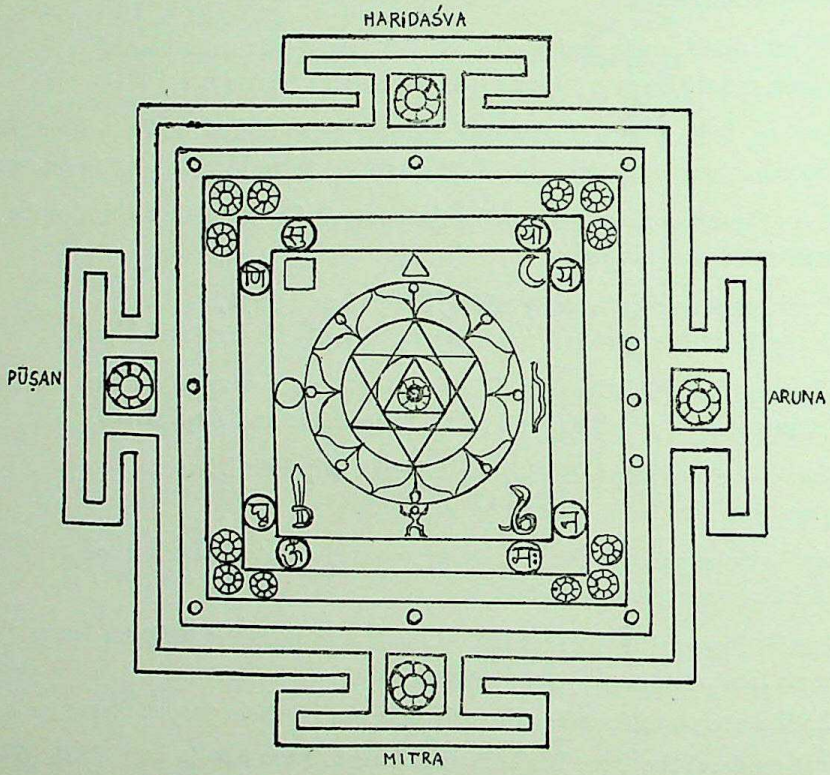
For Sūrya alone this yantra should not be used. For that the Sūrya-yantra of Twelve āvaraṇas (circles) is appropriate. Fig. 3 c 19

The yantra of the mukhaśālā Fig. 3, b corresponds exactly to the architectural outlay. The central lotus is the kendra-garbha, the central point, from where the height of the mukhaśālā is calculated, and which marks its central axis. In our manuscript on the Architecture of the Temple a small square is shown in the centre, which indicates this function. The four smaller lotuses show the places of the four pillars supporting the roof.



SŪRYA YANTRA MAṆḌALA from Sūrya Tantra
Sūrya Yantra of twelve āvaraṇas
Fig. 3 c

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Text on the Architecture of the Sun Temple of Koṇārka, L. 8 A–9 A, c.

GRAHA-ABJA-MAṆḌALA or

NAVAGRAHA YANTRA from Maṇḍala Sarvasva

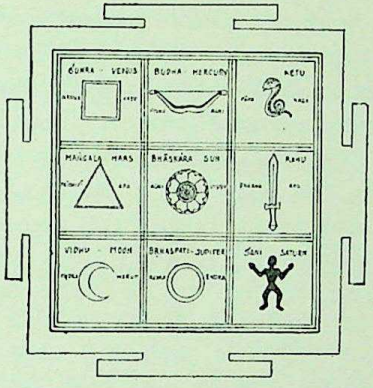

Fig. 4

The Lord of the planets is Sūrya, the planets are revolving around the Earth :
Ravi (Sūrya), Vidhu (Candra), Bhūmiputra (Maṅgala), Paṇḍita (Budha), Guru (Bṛhaspati), Daityaguru (Śukra), Kāla (Śani), Rāhu and Ketu.
Seven are Grahas and two are Upagrahas.
Before doing pūjā to Sūrya, the Planets have to be worshipped.
The lines are drawn on a black cloth spread with rice-powder.
A bhūmi in the form of a square is divided into nine equal parts.
Then a bhūpura is added by lines. I shall carefully explain the respective places of the Planets.
In the centre is Bhāskara represented by an eight-petalled lotus.
In the Agni-corner is Śani of black colour, in the form of a man.
In the South the Devaguru is in the form of a red circle.
In Nairṛta corner is Vidhu in the form of a half-moon.
In the West is Maṅgala in the form of a red triangle.
In the Vāyu corner is Śukrācārya as a white square.
In the North is Paṇḍita as a bow of yellow colour.
In the Īśāna corner is Ketu in the form of a spotted serpent.
In the East is Rāhu in the form of a sword.
With these Planets eighteen Ādidaivatas have to be worshipped :
Sūrya with Agni and Viṣṇu, Vidhu with Indra and Marut,
Kūja (Maṅgala) with Prthivī and Ap, Budha with Viṣṇu and Agni,
Bṛhaspati with Rudra and Indra, Śukra with Varuṇa and Vāyu,
Rāhu with Dharma and Ap, Ketu with Pāpa (evil) and Nāga.

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This Graha-abja-maṇḍala corresponds to the groundplan of the Nāṭamandira or Bandāpana maṇḍapa which is also based on a square divided by four lines into nine smaller squares. These squares are encompassed by heavy pilasters and by corner-walls. They are open on all sides except towards the north, where the interstices between the pilasters are filled with sculptured wall-panels. (Pl. 84 and 88)

Such groundplans were also used in ancient India for the construction of temporary stages, mostly made of wood. The orchestra and the performers occupied the three northern fields, those closed towards outside, the houses of Śukra, Budha and Ketu, while the spectators occupied the rest. The Rājā and his retinue were seated in the centre, in the house of Bhāskara, the Brāhmaṇas were seated behind him in the Bṛhaspati square, the Kṣatriyas to his right and left, in the houses of Maṅgala and Rāhu, the Vaiśyas behind them in the houses of Soma and Śani. The common folk occupied the outer platform all around this central building (see Abhinaya Candrikā by Maheśvara Mahāpatra, publ. by Raghunandan Library, Emar Maṭh, Purī 1967.

This disposition shows how in traditional society even in a theatrical performance the different castes, i.e. vocations in life were assigned their places not only in accordance with their status and dignity, but also according to the planets which were their particular protectors. It is no coincidence that the Rājā should be seated under the sign of the Sun, which rules and illumines all, the Brāhmaṇas under the sign of Bṛhaspati, the Guru of the gods, as they were the Gurus of Rājās and ordinary people, the Kṣatriyas under the signs of Maṅgala (Mars), the god of war and of Rāhu, the Destroyer and the Vaiśyas under the signs of the Moon and of Saturn.

Fig. 4

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PIṆḌI-YANTRA, from Maṇḍala Sarvasva

In a house or a temple where Sūrya has to be installed with his Śaktis,
This yantra has to be worshipped.

On a rectangular plate four divisions are made.
The outer parts are again divided in two.

In the middle two parts the auspicious Sūrya yantra is made.
On the left side is Chāyā, and Māyā is on the right.

These three yantras together are called the Saśaktika Sūrya yantra.
I shall explain the worship of this yantra.

In the middle a red bindu, then a hexagram on which are the bījas :
HRĀṂ HRĪṂ HRŪṂ HREṂ HRAIṂ HRAḤ

Around this, three circles and a lotus of eight petals : Āditya, Bhāskara, Bhānu, Ravi, Sūrya, Divākara, Mārtaṇḍa and Tāpana are worshipped on these eight petals.

Then again three circles for Sattva, Rajas, Tamas, and after that a lotus of twelve petals. Here the Lords of the months are worshipped.

Aruṇa, Sūrya, Vedāṅga, Bhānu, Rudra, Ravi, Aryaman, Kāla, Suvarṇaretas, Divākara, Mitra and Viṣṇu, these twelve months of the year are worshipped.

On both sides of this yantra pūjā is done to the Śaktis. I am explaining the two yantras of Chāyā and Māyā.

Chāyā is the Śakti of the rays (raśmi-śakti), Māyā is the very form of heat (tejaḥsvarūpā). These are the bījamayī Śaktis, who give delight to Sūrya.

The bīja KRĪṂ is for Chāyā, for Māyā the bīja HRĪṂ. Sūrya-pūjā has to be done with the bīja OṂ GHRIṆI.

A bindu set in the centre of a triangle, and a nice circle inside the triangle with a hexagram around the bindu, in such a maṇḍala the attractive Śakti Chāyā has to be worshipped.

On the right side is Māyā. For this a bindu is set and around this a triangle and then a lotus with sixteen petals. After that a square standing on its point and a circle around that. This Śakti giving delight is worshipped on this yantra.

This yantra can be made of gold, of copper, or on bhūja-patra (birch-bark) or sometimes on a ruby (or with rubies ?). It has to be installed in the place where Sūrya is to be worshipped.

This is the best Piṇḍi-yantra for a Sūrya-temple. After worshipping this, other Devas will also be worshipped. Fig. 5 a and 5 b

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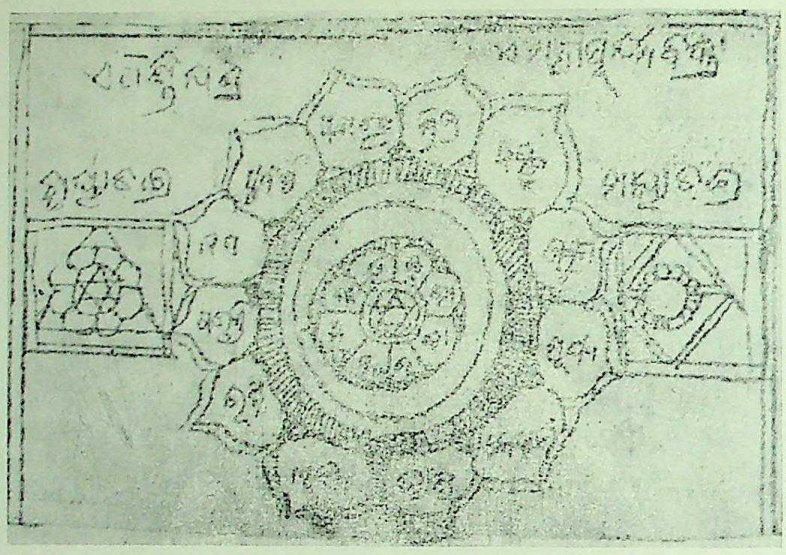
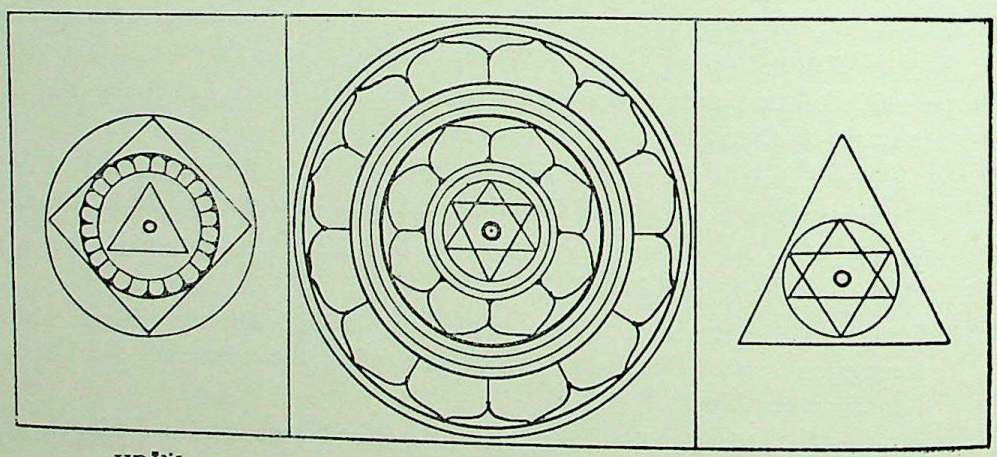


PIṆḌI YANTRA, as drawn on the Ms. on Architecture

Fig. 5 a



PIṆḌI YANTRA or SAŚAKTIKA YANTRA, drawn in accordance with Maṇḍalasarvasva

Fig. 5 b

This yantra lies under the pedestal of the Mahābhāskara image in the Padmakeśara temple.

The drawing made in accordance with the description in the Maṇḍalasarvasva differs slightly from that of our text. The positions of the Śaktis Chāyā and Māyā are inverted.

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Baya Cakaḍa, L. XXXI, 8–13, XXXII, 1, 2, 5

COVERING THE ROOF (from Silpasāriṇī, Chapter on Mudrakā vidhi)

To establish the positions of the three ceilings the height of the śikhara from the end of the wall should be divided into nine equal parts, the uppermost part being reserved for the beki. The width has equally to be divided into nine parts, the two outer parts on each side being reserved for the depth of the wall. Midway in the first horizontal section above the wall the corbelling should begin and be carried through the second division. The third division should go up straight and leave an opening in the centre, which is covered with long horizontal stone-blocs in the fourth division. This is called the vajramudrā. On the eastern side it has a very long stone-bloc projecting, forming the base for the gajasiṁha which will be inserted above it with a tenon. The smaller lions on the three other sides are inserted below this vajramudrā.* Corbelling is again made from the fifth and sixth division upward, leaving an opening above the seventh division, which is closed by the umbrella-shaped muṇḍipathara (see Fig. 6). This is called the garbha-mudrā. The eighth division, the viṣama, is again made with horizontal layers of stone, upon which the beki will come to rest. The width of the beki occupies five vertical divisions, and in the three central divisions a corbelling is made which reaches up to the āmalaka. This is called the kaṇṭhamudrakā. Ceilings should always be made with large stone blocs, never with smaller stones joined together. Fig. 1

CHATRAŚILĀ OR MUṆḌI PATHARA

(communicated by the late Bābāji Mahāraṇā of Purī)

The construction of the śikhara roof, with the viṣama, becomes difficult. Viṣama means difficult, or slanting, or uneven, thus indicating the curvilinear closing of the roof. Closing the corbelling has to be done with great care, especially on temples which have more than one ceiling on top of each other. The uppermost ceiling below the beki (neck) has to be covered with a chatraśilā, also called mudraśilā or chatraprastara or muṇḍipathara. This is a circular sealing stone, carved in the form of a parasol or mushroom, with an upturned edge called siṁha-danta (lion's fang) all around. Its upper surface is incised with the design of lotus petals. The centre of the stone with the stem is pierced by a small channel (niḥśvāsa=breathing channel). This mudraśilā is placed centrally above the corbelled roof, and the roof has to be closed in an auspicious moment. While setting this sealing stone sacrifices have to be offered and the appropriate mantras have to be recited. The mantra for a Sūrya temple is quoted as :

* This ornament is called vajramudrā because on that place on the outer walls are carved the sacred vajramuṇḍis or vajramastakas described in Appendix No. XXI

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"OM ! Chatraśilā of big body, adorned with a lotus navel (padma-nābha), Divākara (the Maker of the day) should protect this Temple ! Pūṣan should protect the foundations, Mitra should protect the body (garbha), Haridaśva should protect the upper parts (śikhara) and Bhāskara should protect the head (āmalaka and kalaśa) !"

Fig. 6 and 1

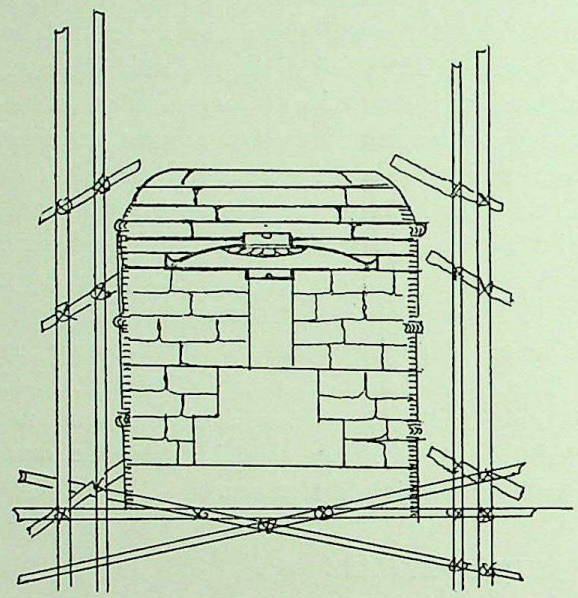

Fig. 6

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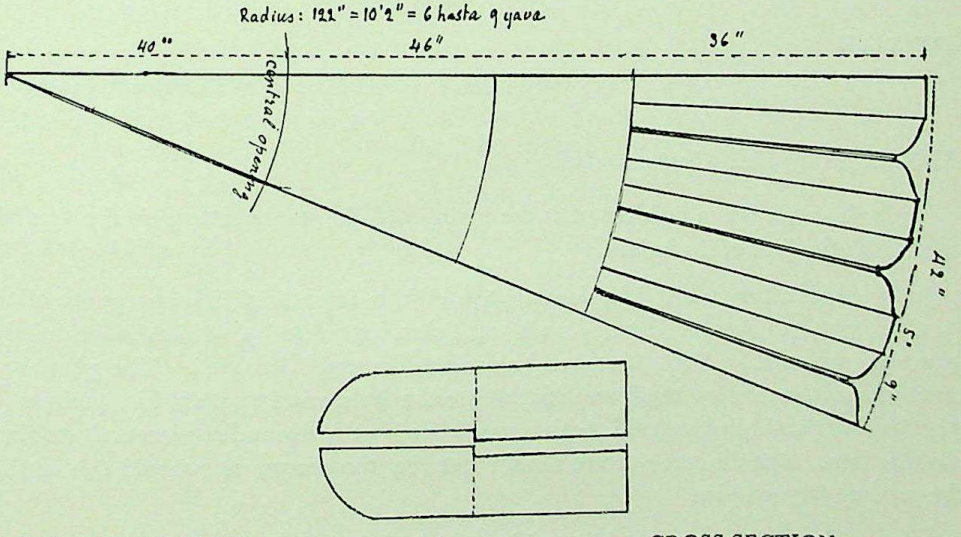
Text on the Architecture of the Padmakeśara Temple, L. 14 B, a

Baya Cakaḍā L. XLIV, 2, 3, 4, 5; XXX, 4, 12

ĀMALAKA=the melon-shaped crowning of the temple

According to the Śilpasāriṇī, small āmalakas can be made of one or two stones, or of eight stones up to a diameter of six hasta. But large āmalakas of eight hasta diameter or more have to be made in two layers, of 16 pieces each. In these the central opening (randhra) should be $\frac{1}{3}$ of the diameter. The middle third part of the diameter should be flat and plain, and only the outer third part should be carved in the shape of a mandāra flower (flower of a legendary tree in Indra's heaven). There are 48 sectors within the 16 parts. To fasten the upper layer into the lower layer, an indent is cut out in the inner surface of the upper layer, into which fits a projection on the upper surface of the lower layer. This prevents the stones from slipping apart. Fig. 7 a and b



ĀMALAKA-SECTOR
of the PADMAKEŚARA
TEMPLE

CROSS-SECTION
of DVIKHAṆḌIA
ĀMALAKA

Behind the temple of Koṇārka, outside the compound wall is the broken piece of an āmalaka, with a piece of the khapuri lying over it, which, to judge from its dimensions, must have belonged to the main temple.

The whole piece is 82″=6′10″ long and 22″=1′10″ high. The carved rim is 36″=3′ deep, the plain part is 46″=3′ 10″ deep. The sides of the entire piece converge at an angle of 22·5°, which shows that the whole circle was composed of sixteen pieces ($16 \times 22{\cdot}5° = 360°$).

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The width of the outer rim of this piece is 42″=3′6″, thus the circumference would have been 16×42″=672″ or 56′. This would come to about 37 hasta, which is quite near the 35 hasta given in the text. If the diameter in this case would be about 224″=19′, it would come to about 12½ hasta, against 16 hasta 6 yava mentioned in the Mādalā Pāñji. The single sectors of the āmalaka are 14″ broad at the outer circumference. The piece here described has two full sectors, plus ⅔ of a sector on one side and ⅓ of a sector on the other side, which means 3 sectors in all. This is the usual way of dividing the stones. In this large āmalaka the layers composing it must have been three and not only two, as in the Mādalā Pāñji it is mentioned as tinkhaṇḍiā (of three pieces).

APPENDIX VIII

Ref : Text on the Architecture of the Padmakeśara temple,
L. 14 B, a L. Baya Cakaḍā, Leaf L, 13

KHAPURI (Sanskrit Kharpara=skull)

The kharpara or khapuri is the plain, roof-like stone that covers the āmalaka and holds the foot of the kalaśa.

According to the Maṇḍanādhyāya of the Śilpasāriṇī, kharparas are of two kinds : ghaṭita (skrt. built) and rodhita, (skrt. restrained), which in local Oriya parlance are called : kasā (fastened) and basā (seated) khapuri. The ghaṭita or kasā khapuri is used on small temples, where the kalaśa is first placed in position on the āmalaka and the khapuri is built around its foot with smaller pieces of stones to hold it firm. But the stone-pieces should not be too many, nor should this method be used on big temples.

The rodhita or basā khapuri is meant for big temples and is made in two layers of two or four stones. If the area to be covered (the diameter) is less than four hasta, each layer is made of two stones, but when the diameter is more than four hasta, it should be made of four stones. They should have a central circular hole, in which to insert the kalaśa foot and have it firmly seated. The lower layer should be fastened with cramps and the stones of the upper layer joined with karala. The stones should be put in such a way, that two joints should never overlay one another. See also Appendix XI.

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Text on the Architecture of the Padmakeśara Temple, L. 14 B, c)
Baya Cakaḍā, L. XLIII, 9, 10, L, LI, LII.

KALASA OR AMṚTA-KALAŚA (the Vase of Immortality crowning the temple).

According to the Śilpasāriṇī, kalaśas on large temples were always made hollow and in two pieces, a vessel on a foot (taḷanauti) and a cover (dadhinauti). In the hollow between the two, consecrated substances, small symbols, precious stones, gold, etc. were placed. The whole kalaśa was perpendicularly pierced from cover to foot by a small channel (niḥśvāsa), into which the stem of the emblem of the particular temple was inserted, as for instance a Triśula for a Śiva temple, a Cakra for a Viṣṇu temple or a Padma (Lotus) for a Sūrya temple. When it was a kalaśa with a very high foot, a so-called dīrgha-daṇḍa-kalaśa, this channel had even to reach down through its foot into $\frac{1}{3}$ of the depth of the khapuri.

Fig. 8

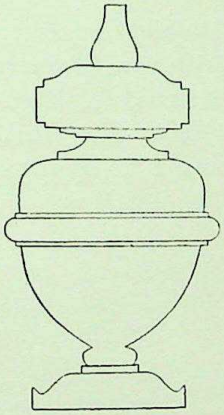
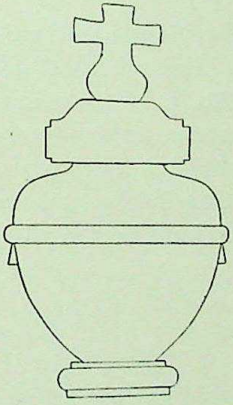


Fig. 9 b



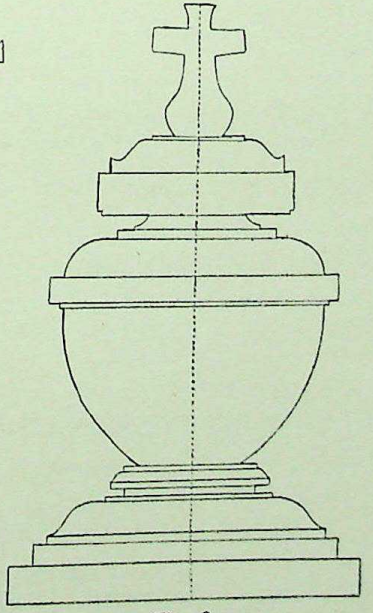


Fig. 9 a

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In Koṇārka three drawings of kalaśas are incised into the stone-flags paving the way on the southern side between the garbha and the mukhaśālā. They seem to be drawings in actual size of kalaśas which may have crowned some of the shrines :

No. 1. Kalaśa with a foot whose base shows the raised edge as mentioned in the text, height 4 feet, 3 inches. (Fig. 8)

No. 2. Kalaśa presumably inserted into an egārupaṭṭikā with a broad base. The egārupaṭṭikā in spite of having only nine bands instead of eleven, does not look like a foot, but like a postament holding the foot, height of the whole 6 feet. (Fig. 9 a)

No. 3. Shows probably only the uppermost band of an egārupaṭṭika, just below the kalaśa, height of the whole 4 feet 3 inches. (Fig. 9 b)

By the side of these drawings there are others showing concentric circles, of which the biggest has a diameter equal to the width of the base of the egārupaṭṭikā of design No. 2. It is not impossible that these designs were made, when difficulties arose about the setting of the big kalaśa on the main temple, and Dharma Mahāpātra wanted to demonstrate the way in which he intended to consolidate the big kalaśa. Only in that case the drawing would not show the actual size of the kalaśa, which must have been considerably larger.

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NĀLA-PATHARA OR ĀYUDHA-DAṆḌA, from Śilpasāriṇī, Chapter on Āyudha lakṣaṇa

The āyudha is the crowning emblem of the temple, which has a stem and is inserted into the canal piercing the cover and the foot of the kalaśa. Kalaśa and āyudha have to be planned together. Āyudhas can be made of stone or of metal. Stone āyudhas are of inferior type, their stems descend only into the upper half of the kalaśa, and should be used only on temples upto 30 hasta. On temples from 30 to 52 hasta height the āyudha should be made of metal and reach down into the kharpara. On the abode of Sūrya a lotus emblem should be set, studded with jewels. The lotus should be half-opened and have a calyx below and a seed-pot inside. It should have a long stem inserted in the kalaśa, and be placed upon a pādakumbhikā or baiṭhikumbhi, which is above the kalaśa and is meant to provide a seat for the āyudha. Fig. 10

Our texts only speak of stone āyudhas, although the Koṇārka temple, belonging to the largest type of temple, should according to the Śilpasāriṇī have an āyudha with a very long stem altogether made of metal.

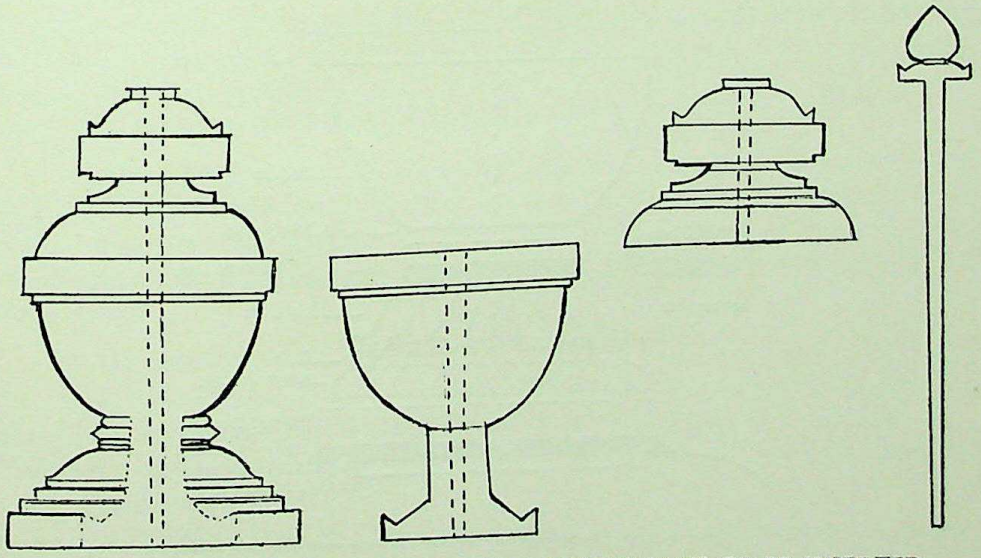

Fig. 10 KALAŚA IN TWO PARTS WITH EMBLEMS TO BE INSERTED

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Text on the Architecture of the Padmakeśara Temple, L. 10 A, 14 B, b
Baya Cakaḍā L. L 5–8, L. LI, 5–11

EGĀRUPAṬṬIKĀ OR EGĀRUMUṆḌI OR UGRAPAṬṬA, acc. to Silpasārinī

According to the Śilpasāriṇī this is a contrivance used only on very high temples. Here it has two functions : one is to consolidate the kalaśa on top of the āmalaka and kharpara, the other is to raise its height, so that it should remain visible from below even at close quarters. It is a kind of pyramidal pedestal made of very hard stone. It is made in two parts hollowed out to embrace the foot of the kalaśa which are, together with that foot inserted into a circular excavation at the centre of the kharpara. The two halves of the ugrapaṭṭa or egārupaṭṭikā are fastened together with two iron-belts, one near the base and one near the top. These belts are called cumbaka lohā, and because cumbaka lohā also means magnet or load-stone, this appellation may have given rise to the legend of the load-stone on top of the temple, which attracted ships to the shore and made them run aground. The name egārupaṭṭikā, meaning eleven bands, is evidently derived from the eleven ornamental divisions which constitute its outer design. They are named : pāda, paṭṭi, kumbhaka, paṭṭi, rathamurddhini or padmabeḍha, bālā, ugrapaṭṭa, jharavali, bālā, kāṇika, bālāmudrā. They are rendered in Fig. 11 in the proportions mentioned in the text. These divisions can also be less, as shown in the design of the kalaśa from Koṇārka in App. IX

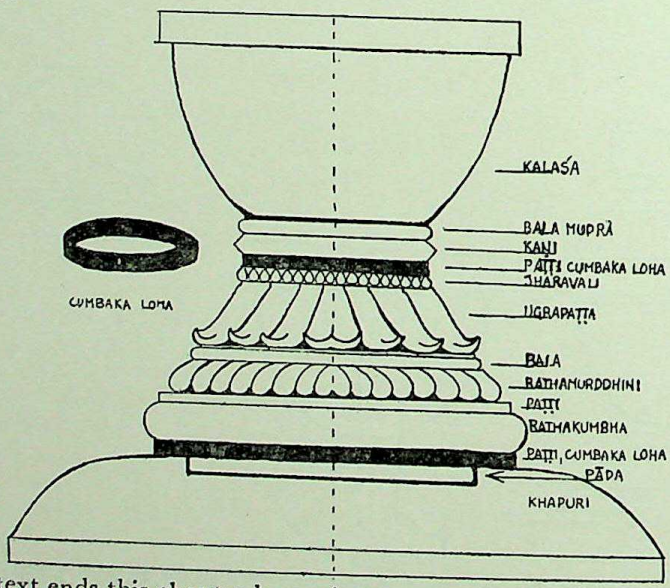

Fig. 11

The text ends this chapter by saying :

When the garbha is in form of a chariot and the basement (pīṭha) has three times the height of others, a skilful architect will set an ugrapaṭṭa on top. Fig. 11

* (Kripāsindhu Miśra, in his book on Koṇārka is the first to have been aware of the existence of the egārupaṭṭika, without however knowing its function. In his description of the uppermost part of the temple he noted this word with a point of interrogation.)

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Text on the Architecture of the Padmakeśara Temple, L. 17 B, c, d

Baya Cakaḍā, L. 15, 11 and 16, 13

GHAṆṬĀKARṆA BHAIRAVAS (Plate LXXIV)

These are the instructions communicated by Paṇḍita Dāmodara Pūjāpaṇḍā Sāmanta, Chief Pūjārī of the Jagannātha Temple in Purī, regarding the worship of the Ghaṇṭākarṇa Bhairavas, which are placed on the first roof in the centre above the portals :

For the protection of the temple pūjā has to be offered on Bhādra Kṛṣṇa pañcamī to the Ghaṇṭākarṇa Bhairavas on all four sides of the temple. This Pūjā is done after sunset with sandal, incense, light and food-offerings. A bell made of jūṇa-grass has to be hung from the portal with recitation of the following mantra : "Great Hero Ghaṇṭākarṇa, you who removest all diseases, who destroyest and drivest away all calamities, you, the Beloved of Hara with the blue throat, who art part of his Energy and art wearing Nāgas as ornaments, you Deva, do protect our temple."

Of the two Ghaṇṭākarṇa Bhairavas above each portal one is of peaceful and the other of wrathful aspect. The two above the eastern portal are Aghora and Ghora Ghaṇṭākarṇa Bhairava, those above the southern portal are Anugra and Ugra Ghaṇṭākarṇa, those above the northern portal are Caṇḍa and Pracaṇḍa Ghaṇṭākarṇa Bhairava. Those above the western side towards the Vimāna were somewhat different, because they are called Gaṇeśa and Śiva, or Ekapāda Bhairava. Unfortunately they were destroyed, when the big temple-tower fell down.

These Bhairavas are all represented with four faces and six hands, in which they are holding various weapons. They are all in dancing posture and are placed on boats, which serve as pedestals. There is one and the same prayer for all of them, which differs only in the initial invocation, when addressed either to a peaceful or a fierce aspect.

The wording is as follows :

Om, Ugra Ghaṇṭākarṇa Bhairava ! namaḥ ! do protect this temple and this house.
Always protect this solid monument (sthira-kīrti), that gives joy to the Devatās !
Protect it from bhūtas, protect it from pretas, protect it from fire and from lightning,
and protect our king !
Protect the waters by your feet, protect the earth by your belly, protect the firmament (vyoman) by your head !*

or :

Om, Anugra Ghaṇṭākarṇa Bhairava namaḥ ! etc.

* According to Monnier-Williams' Sanskrit Dictionary vyoman may also mean a place where the Sun is especially worshipped, as for instance a Sun-temple.

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The Dhyānas of the various Ghaṇṭākarṇa Bhairavas are also more or less the same, except for the different attributes they hold in their hands.

Example of a Dhyāna :

Peaceful, of reddish colour, with four faces and with knots of matted hair,
Holding in his right hands cakra, khaṭvāṅga and pānapātra,
In his left hands ḍamarū, dhvaja, kapāla,
Wearing a nāga-yajñopavīta, mounted on the world-boat (saṁsāra-pota)
He is dancing, protecting the temple.

DHYĀNA OF GHAṆṬHĀKARṆA BHAIRAVA, according to Saudhikāgama

Ghaṇṭākarṇa, the great Hero, the Remover of all diseases,
Having a large body of raincloud colour, is the protector of God's temple.
His four faces are set with big teeth and each with three eyes.
Adorned with a garland of skulls, wearing a mukuṭa on his matted hair,
He is standing on a boat, Master of the boat, hung around with serpentgarlands,
Holding a khaṭvaṅga, a drinking-bowl, a lance and a ḍamarū,
Protector of the Waters, the Earth and the Firmament, Guardian of the Temple,
Ghaṇṭākarṇa should be set up in such places and should always be worshipped according to rules.
On the fifth day of the dark fortnight of Bhadra, in the twilight after sunset,
Bhairava, the Protector of the city or temple (pura) has to be worshipped above the portal.

(or :

The Protector of the temple above the portal has to be worshipped.)

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MĀDALĀ PĀÑJI, FASCICLE No. 6 of NARASIṀHA DEVA I.

Baya Cakaḍā, L. I

Narasiṁha Deva in his 5th aṅka informed seven of his Chiefs (Biśois) of his plan to build this temple.

After he had decided to build the temple to Sūrya Deva at Koṇārka Mahī (land of Koṇārka) in the form of a chariot, he started the work in his fifth aṅka with 1200 workmen, on Thursday śukla daśamī. This is mentioned in all landgrants of his successors.

Then the Rājā went to war against the Badshah of Gauḍa (Bengal). He defeated the Badshah and conquered seven Forts. From there he brought nine elephants loaded with jewels and gold, which he deposited in the big temple of Puruṣottama.

(This may refer to the conquest of Varendrī and Rāḍha, two divisions of Bengal, described in C. P. Grants of Narasiṁha II and Narasiṁha IV of the Gaṅga Dynasty. To this campaign may also refer the 8th Unmeṣa of the "Ekāvali", where he is called "Yavanāvani-vallabha" (Master of the Yavanas' country). (See Baya Cakaḍā, Leaf XXXV, 9 and Introduction, para 8 : Rājā Narasiṁha I of the Gaṅga dynasty).

APPENDIX XIV

Baya Cakaḍā L. IV, 27

MĀDALĀ PĀÑJI FASCICLE No. 8 of NARASIṀHA DEVA I.

Within an area of 5 krośa around Tāpaṅga, camps had been set up for quarrying stones for the Padmakeśara temple. For quarrying Regaḍāchiṭakuṇḍā stones Nārāyāṇa Mahāraṇā and 27 other pathuriās were staying there, while Vīramalla supervised the work.

In this area there was a a small Devī temple, and the Devī of this temple told Vīramalla in dreams : If you do not first build a temple for me in this area, you will not be able to quarry one single stone.

Therefore these 27 people built a small Kākharā temple of 32 hasta (height) and Rājā Narasiṁha Deva consecrated it in the 8th aṅka. The name of the temple was Dakṣiṇa Caṇḍī. After gratifying the Devī in this way, the Rājā was able to collect one lakh of stones for the Padmakeśara temple. He also gratified Vīramalla with presents.

(The temple is still in existence. and a tradition amongst local people confirms that it was built by Narasiṁha Deva I.)

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Baya Cakaḍā, L. XXV, 6–11

MĀDALĀ PĀÑJI FASCICLE No. 8 of NARASIṀHA DEVA I.

Bhūmi Khaĩjā (Land assignments) by Sudarśana Taḍhau.

Laṅguḷā Narasiṁha Deva returned in the 12th aṅka from the war in Varāha bhūmi (Bankura). He came first to Biḍānāsī and then went to Puruṣottama kṣetra. He met the officers, whom from his 2nd aṅka onwards he had sent to explore the places in Uḍrakhaṇḍa, where stones could be quarried for the construction of the Padmakeśara temple.

The Sāmanta of Nīlagiri Madhupāṭa Sahani who had supplied muguni stones from the Devagiri Hill in Nīlagiri (State), via the Tudigaḍia and the Gobari rivers, received 10 bāṭi land with honours at Jamadahadi-pāṭaṇa. His work had been finished in the 11th aṅka.

Sāma Baḍajenā who had quarried stones from Baneśvara Hills was given 7 māṇa land with honours in Buddheśvara-pāṭaṇā.

Lakṣakaṭā Jhapaṭarāya who by the 11th aṅka had supplied 1 lakh 27 thousand (127000) stones from Viśvanātha Hill in the Arāgaḍa Mountains, was given the village-fort of Ṭikarapaḍā.

Subuddhi Pāikrāya who had upto the 11th aṅka supplied 2,30,000 chiṭasāhāṇa-stones (sandstones) from Tāpaṅgagaḍa on both sides of the Pandavāhara Hill, via the Dayā river, received one village Mānapura with Gaḍacaṇḍī (temple ?) and 7 bāṭi land.

Hariścandana who had brought bauḷamāḷā and muguni stones from Kerāṇḍiṃāḷa Hill via the Potānoī river to the Mahānadī (Ṛṣikulya), then through the Cilka lake on the side towards the Salia river, received the title of Daḷabeherā of Malud (island)* For having carried these stones from the Cilka to the Padmatoḷā gaṇḍa via the Dayā river, the Choṭarāya of Tarāboi received 3 bāṭi land in the village Haridamada.

Raghujenāmaṇi of Biribāṭi village (Cuttack Distr.) who had sent large stones coming from Khiching via the Mahānadī** upto the 11th aṅka received 13 bāṭi land.

The Tallyman (stone-counter) in the Padmatoḷā-gaṇḍa was given a village-fort Māṇatrigaḍa.

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* Both the route described and the quality of stone (muguni) appear doubtful.

** Mahānadī again seems so be a designation for the Citrotpala, which is a tributary of the Mahānadī.

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Budhadhara, the Daḷabeherā of Rathipura who upto the 11th aṅka had supplied stones from the rock-bed of Rathipura via the Bhārgavī river received a part of the Harirājapura village named Buddheśvarapāṭaṇā.

The Daḷabeherā of Rathipura (also) supplied 3853012 māṅkaḍā stones from Raṇatāṅgi and Bhīmatāṅgi rockbeds and received the village of Barapadāpāṭaṇā.

Vīramalla who had gone in the 2nd aṅka (to quarry stones) received 13 māṇa land.

The cāpadaḷāis (men on the barges) of Remuṇādaṇḍapāṭa received 10 māṇa land.

Nāyaka Bhramarabara Baḍajenā was honoured with a kanakasnāna (see also Baya Cakaḍā, L. LXII, 9). He also received an orchard of 10 bāṭi, named "Patharakaṭā Toṭā" at Puruṣottama.

These are the gifts of land for supplying stones.

(Copied by Vīra Sāmantarāya, in the year 1234 (Utkalābda Fasali or Sāla era=1827 A. D.) on the Daśaharā day).

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Baya Cakaḍā, L, XXXIX, 9

Report from the MĀDALĀ PĀÑJI, FASCICLE No. 6 of NARASIṀHA DEVA I.

This Rājā (Narasiṁha Deva) fought during four years against the Nawab of Nakhaur (Lakhanor). His Commander-in-Chief was his brother-in-law Sahasramalla. During this period, in the 7th aṅka, a battle took place at Sahipur, where the Rājā was struck and fell unconscious on the battlefield. His people thought that the Rājā had been killed and went in search of his body. In the meantime his small elephant (guṇṭhuli hāti) Sudehī had lifted him with his trunk upon his tusks and carried him back to his camp. Because he had saved his life the Rājā always kept him like his own son and had ten servants attending upon him. This elephant also did service in the big temple of Puruṣottama. When the Padmakeśara temple was built, the Rājā gave orders that his likeness should be set up there. In this way that small elephant, for having saved his life, has been immortalized in stone for all times.

That the figure of one of the elephants at the northern portal of the mukhaśālā was to be the portrait of Rājā Narasiṁha Deva's favourite elephant is confirmed by the Baya Cakaḍā, Leaf XXXIX, 9, and this would make the above legend seem plausible. Moreover it is possible that it is this elephant who also had the honour of being portrayed with his attendant on the front of the pedestal of the pūjā image in the garbhagṛha, in the centre, just below the image of the Rājā receiving the ājñā (na) mālā from the hands of the purohita.

APPENDIX XVII

Baya Cakaḍā, L. XXXV, 9

According to Dr. Harekrushna Mahatab (vide History of Orissa, Vol. I. p. 230) the war against the Nawab of Lakhanor (Nakhaura of our text) in Bengal was fought in 1243-44 A.D. The decisive victory of Narasiṁha over Nawab Tughan Khan was achieved a few days after March 14th, 1245 A.D. (vide O.H.R.J. p. 70). According to the Baya Cakaḍā, Ms. 2, the transfer of the spoils to Koṇārka would have taken place in the month of Mārgaśira, Sāla era 652, corresponding to November-December 1245, which means within about eight months of the victory, early in the Rājā's 14th aṅka. But according to the Baya Cakaḍā Ms. No. 1 this transfer would have taken place only ten years later, in 1255 A.D., which is not likely, since it would fall into the 23rd aṅka, by which time the temple had long been consecrated.

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Text on the Architecture of the Padmakeśara Temple, L. III 9 A, a and Karmāṅgī

The twelve Constellations or signs of the Zodiac with their Sanskrit and corresponding Latin names inscribed at the position of the wheels which were consecrated to them, as indicated in the schematic design on Leaf VI A, b of the text on the Architecture of the Sun temple.

In the section on Sūrya, the Saudhikāgama gives details on the various aspects the Sun God assumes during the twelve months of his yearly course, represented by the twelve wheels on each side of the Sun Temple :

Sūrya is the visible manifestation of Parabrahman and the very Self of all the Devas.
On rising he is in the form of *Brahmā*, at midday in the form of *Maheśvara*,
On setting he is the Self of *Viṣṇu*, passing through the various phases of creation, maintenance and dissolution.
Taking these three forms Sūrya is the originator of the whole world.
As Golden Seed he is *Bhānu*, seated on a chariot drawn by seven horses,
Mitra as all the life-breaths, *Pūṣan* as the essence of light and heat (tejas)
As *Rudra* he emits a thousand rays, as *Ravi* he is the manifest visible divinity,
The peaceful consort of Uṣas and Chāyā, the life measure of living beings,
As *Sūrya* he bestows the fruit of the three paths (Dharma, Artha, Mokṣa).
As *Divākara*, the maker of the day, he is the lover of the lotus,
This Āditya, the foremost of the Planets is protecting all the worlds.
Without worshipping the Sun, the path of the Kaula will be fruitless.
In the glorious Gāyatrī maṇḍala Ravi is worshipped in the three worlds.
Travelling within the three tropics Sūrya is evidence of the eternal Brahman.
Moving across the circle of the universe he is the very Lord of the celestial spheres.
Traversing one after another the constellations, his body takes entirely different aspects.
When Mahābhānu is in Maghā (lunar mansion) governing the solar sign of Makara
He is called *Aruṇa* ruling over the course of the sun.
When in conjunction with Kumbha in the month of Phalguna he is known by the name of *Sūrya*.
When in the sign of Mīna in the month of Citrā he is *Vedāṅga*, the Bestower of boons.
In the sign of Meṣa and the Mansion of Viśākhā he is *Bhānu*, pure Intellection.
When in the sign of Vṛṣa and the Mansion of Jyeṣṭhā he is called *Rudra*.
When in the sign of Mithuna and the Mansion of Purvāṣāḍhā he is *Ravi*.
When in the sign of Karkaṭa and the Mansion of Śravaṇā he is *Gabhastimān*,
When going to the sign of Siṁha and the Mansion of Bhadrā he is known as *Haridaśva* (or *Yama*)
When in conjunction with the sign of Kanyā and the Mansion of the Aśvinī he is the very *Hiraṇyaretas* (or *Suvarṇaretas*)

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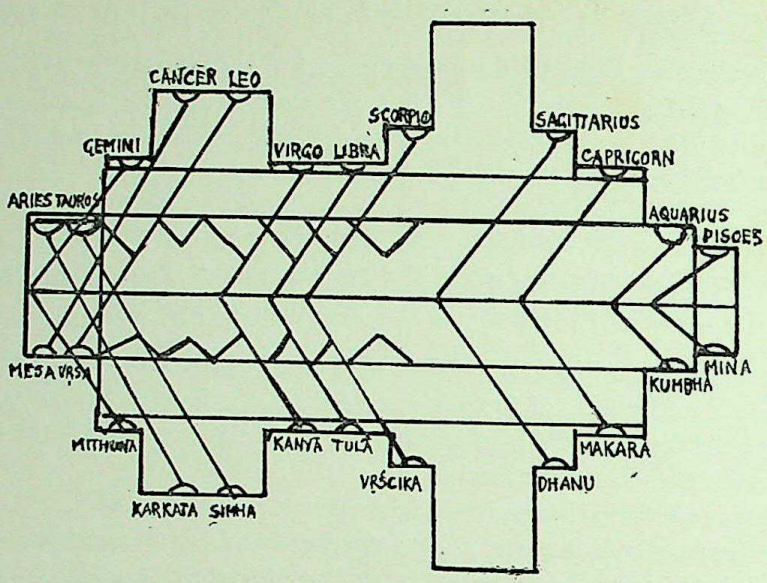

Fig. 12

When in conjunction with Tulā in the Mansion of Kṛttikā he is *Divākara* mounted on a chariot.

When in the sign of Vṛścika in the Mansion of Mṛgaśirā he is always called *Mitra*, the friend of living beings, the Light-giver.

When going into the sign of Dhanu and the Mansion of Puṣyā Sūrya is verliy *Nārāyaṇa Hari.*

As is Viṣṇu such is Sūrya, there is no difference between the two.

At the junction of the signs of Dhanu and Makara he is *Bhāskara Parameśvara* (the highest divinity).*

Who worships Ravi at this time will undoubtedly obtain liberation.

Who at this junction worships on the banks of the Gaṅgā, at Prayāga or on the banks of the Candrabhāgā will go to the abode of Sūrya (Sūryaloka)

OM HRĪM GHRIṆĪ SURYĀYA : Who worships the Sun in ekapada pūjā (standing on one leg)

With this mantra will definitely obtain siddhis.

Who worships Bhāskara Viṣṇu on the seventh day of the bright fortnight of Makara-Maghā will certainly go to Brahmaloka."

---

* Bhāskara Parameśvara is not one of the twelve variable aspects of the Sun God. He is not worshipped in any sign of the Zodiac or the lunar Mansions. He is the central essence of the Sun God embracing all his various aspects, and therefore he is worshipped at the junction of the signs of Dhanu and Makara at the so-called Makara Saṅkrānti, which a few thousand years ago may have corresponded to the point of the winter solstice and the beginning of the northern course of the Sun, the Uttarāyaṇa. As such he is placed at the centre of the circle of the Zodiac and was the main divinity worshipped at Koṇārka. In how far however the sculptures on the axles and the spokes of the various wheels of the temple correspond or contain any reference to the character of Sūrya in the particular month to which they belong has not been elucidated so far.

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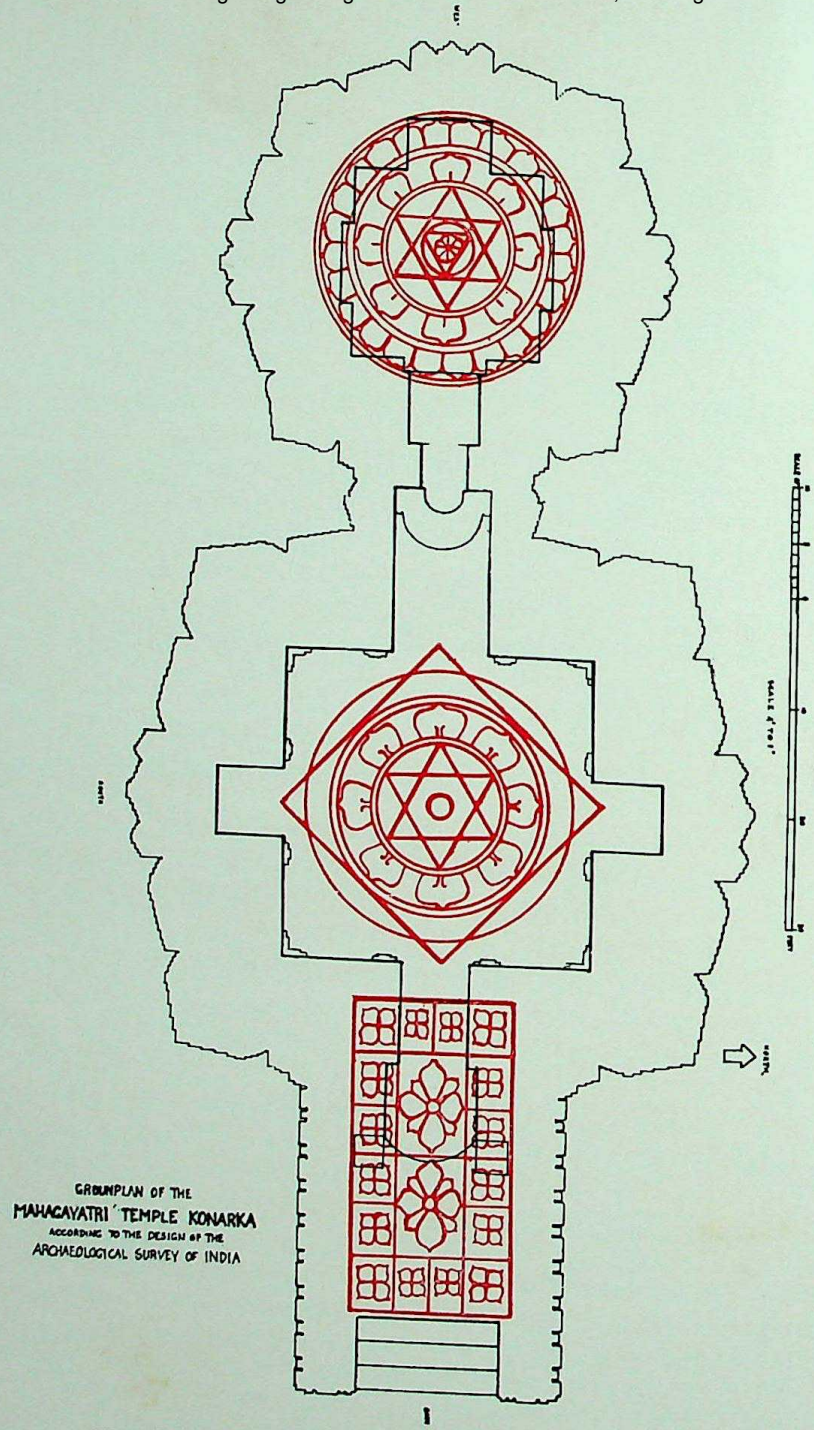

Fig. 13. Mahāgāyatrī Temple Groundplan with Yantras.

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Text on the Architecture of the Padmakeśara Temple, L. 22 A
Baya Cakaḍā L. XXXIV, 4
Pl. IC

The three yantras underlying the Mahāgāyatrī temple have each a particular shape. One is circular, one is a square standing on its point, and one is a rectangle. The diameter of the circular yantra for Mahāgāyatrī is taken to encompass the inner corners of the garbhagṛha, the square yantra for Sāvitrī is taken to reach with its points to the four sides of the mukhaśālā's inner room. The position of this yantra is reflected in the construction of the mukhaśālā, which had a corbelled roof cutting its edges, of which the lowest portion with animal friezes is still in situ. The rectangular yantra for Sarasvatī on the front platform reaches from the doorstep of the mukhaśālā to the limit of the outer stairway. Its width is half its length and thus it is composed of two regular squares.

When the dimensions of the yantras are taken according to these criteria, it results that all three, although different in shape, cover exactly the same area in space. This evidently must be based on some geometric-mathematical speculation, and may in itself have a symbolical significance. This significance, however, remains to be investigated. (Fig. 13)

MAHĀGĀYATRĪ DHYĀNAM, according to Saudhikāgama

O Devī, thou art the Mother of all the Vedas, the three worlds salute thee who art in the form of the mantra-bīja (seedword)

Thou, the subtlest and the best, art dwelling within the Sun's aureole, your head adorned with gems of all sorts.

You lovely, fortunate one, established on a lotus with twenty-four petals, adorned with choicest necklaces and wristlets, wearing earrings studded with gems,

Holding cakra, śūla, akṣamāla, a full-blown lotus and varada mudrā (in the right hands)

A vessel of purest water, a white śaṅkha, a ḍamarū, the Nigamas (Vedas) and abhaya mudrā in the left hands,

Wearing gerua garments and a waist-belt made of the sacred thread,

We salute the great Gāyatrī, the Remover of all sins, who is the OMKARA (Tryakṣarī), the Brahmavidyā.

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DHYĀNAS OF THE PĀRSVA DEVATĀS OF MAHĀBHĀSKARA (from the Sūrya Tantra)

Dhyāna of Pūṣan

Of the colour of liquid gold, with a peaceful countenance and a smiling face, wearing earrings with lotus-ornaments, 1
With a beautiful bejewelled headdress and a hip-belt (mekhalā) with nine gems,
With tinkling bells, a necklace and a chest-ornament hanging beautifully from his neck, 2
Holding in two hands two full-blown lotuses on stems, having an aureole formed by rays, surrounded by Devas and Gandharvas, 3
He wears precious garments of red colour and on his shins well-protecting boots.
With lotuses in his two hands, he is presiding over the northern and the southern course (of the sun). 4
On the right side is standing the Day (Divasa) and on his left side the year (Saṁvatsara),
Peaceful, holding sword and shield, with Agni and Vāyu, Protectors of the door. 5
Connected with the Constellation of Puṣyā (Sagittarius), he is riding on a chariot drawn by seven horses, conducted by a Driver.
Be saluted, Pūṣan, the very form of Light, giving delight to thy worshippers.

Pūṣan Gāyatrī

OM, contemplating this form of Light, I meditate on you of seven colours. May Pūṣan impel and guide us :

Dhyāna of Mitra

Reddish, of peaceful aspect, adorned with lotuses,
Wearing lotus ornaments in his ears and being crowned by a hair-knot in lotus-form, 1
Wearing divine garments of variegated colour, a sacred thread studded with gems,
Holding two lotuses in his lotus-hands, having the essence (or seed) of the lotus, 2
Mitra the life of living beings, the best sap of plants,
Always drains the sap of life, and then again restores existence. 3
In day-time he burns the world by his glow, absorbing all sap (rasa),
At night he vivifies all living creatures. Mitra manifests as the sap (or essence) of Deathlessness. 4
Surrounded by the Lords of the Month and of the Year and by four Śaktis,
By Fire (Agni) and Water (Ap). These two devas always serve and worship him. 5

Mitra Gāyatrī

OM ! Contemplating the mass of rays, I meditate on the essence of Life. May Mitra impel and guide us !

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Dhyāna of Haridaśva

With a luminous, peaceful face, decked with many ornaments,
Wearing a divine headdress made of gold and studded with rubies, 1
And arms decked with armlets, holding lotuses in his two hands,
Prabkākara riding a horse of large body speeds on his way. 2
A Light-horse of great speed, sharp, emitting a golden glow,
His head consisting of seven colours, his limbs all covered with divine ornaments. 3
His tail-hair sends out a thousand rays in all directions,
This sacrificial courser travelling through the ether (vyoman)
Has emerged from Dhātṛ's (Brahmā's) Great Sacrifice. 4
Dhātṛ is the Protector of the Horse, Viṣṇu is his Nourisher, Revanta, the best horseman is travelling in the orbit of the Constellations 5
Together with the Lords of the Months and the Year and with four Śaktis.
He is worshipped by Siddhas, Devas, Gandharvas and men. 6
With the Ṛṣis Aṅgirasa and Śatānīka, rich in religious merit,
Knower of the Sūrya mantra, I salute Haridaśva, the Bestower of boons. 7

Haridaśva Gāyatrī

OM ! Contemplating the great Light, I meditate on this form of the Sacrifice ! May that Horse direct and impel us !

Dhyāna of Aruṇa

Aruṇa of copper colour, guiding the chariot, wearing an armour on his chest,
With diverse ornaments and a headdress set with rubies. 1
The circle (cakra) of his navel is at the place of his feet.
Holding a lotus in each hand, this Deva with golden wings should be worshipped before Sūrya. 2
Thou art the first opening of Sūrya's eyes, the eternal form of the Seed (retas).
The Seed that flows out as the Law (ṛta), liquid, resplendent and cooling. 3
By the Liṅga living beings are created, by the bodily liṅga they come into life,
Thou, with a liṅgaless body, art the Creator of all living beings.

Aruṇa Gāyatrī

OM ! Contemplating Sūrya in the form of a child (the rising sun), I meditate upon that form of Light (Illumination). May Prāṇa impel and guide us !

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THE SŪRYA ŚAKTIS according to the Sūrya Tantra, Ch. 5.*

The Sūrya tattvas should be meditated upon with their Jyotiḥ-śaktis (Light-śaktis) in their proper order.

At the time of Āvaraṇa pūjā** Dīpta and other Guṇamātṛkās should be worshipped with their respective mantras.

At sunrise and at sunset, in their proper time Uṣas and Sandhyā, and the two Śaktis Chāyā and Māyā should be worshipped.

Uṣas is of orange colour, Sandhyā has the colour of dying fire (pale red)
Chāyā is smoke-coloured, Māyā golden like a ray of light.
These four Time-śaktis (kāla-śakti) decked with various ornaments,

Hold in one hand a rainbow (dikcāpa) and a lotus in the other, or sometimes they make abhaya mudrā.

These four Devīs having the form of spiritual knowledge (jñāna-svarūpa) are the four Śaktis of the Chariot (ratha-śakti)

They are Light (tejaḥ-śakti), penetrating Power (gati-śakti), Heat (tapaḥ-śakti) and Illumination (jñāna-śakti)

Tejaḥ-śakti is of golden colour, Gāti-śakti is pale red (nirvāṇa pāvaka)
Tapaḥ-śakti has the colour of pungent smoke (dhūmra), Jñāna-śakti is a shining light.

All, adorned with various ornaments, hold a lotus in their hands and make abhaya mudrā.

As a reflection of the circle of Ādityas these Śaktis should be worshipped.
Without worshipping the Śaktis the pūjā of Ravi will be fruitless.

As are the forms, the times and aspects of Ravi, thus are the Śaktis in the circle around Ravi, that should be worshipped.***

---

* These Śaktis appear to be those represented by the sides of the Pārśva Devatās in the upper Niśā-temples of Koṇārka.

** Pūjās to the attending surrounding divinities, assuming various aspects of the Sun God.

*** See also Introduction, para 4 and 5.

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Text on the Architecture of the Padmakeśara Temple, L. 13, B, c

Baya Cakaḍā, L. XXII, 20

TRIMUṆḌI, VAJRAMUṆḌI OR VAJRAMASTAKA (*see also Glossary*)

Formally this ornament on the front of the śikhara may be derived from the buddhist chaitya window, and therefore be of buddhist origin, to which also the word vajra may point (vajrāsana, vajrasattva, vajrayāna, etc.). In the Hindu tradition the protective function of the vajramuṇḍi is traced back to the Rāmāyaṇa, where it is said that the palace of Rāvaṇa in Laṅkā had a vajramuṇḍi on its front, and that nobody could ever vanquish him as long as the vajramuṇḍi remained intact. Knowing this, two traitor Rākṣasas went to Rāma and told him, he should first pierce the vajramuṇḍi with his arrows, after wich only he would be able to overcome Rāvaṇa. And so he did.

In the Śilpa Prakāśa various vajramuṇḍis are described according as to whether they were to be placed on the khuras or the doorjambs, or on top of niśas or on the front of the śikhara, where they are said to protect the temple against lightning.

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GLOSSARY

1. ARCHITECTURAL TERMS

A

Achidra-bhitti	the central uncarved core of the wall
Aḍaṅga	platform, berm
Āḍa-ghara	pillared niche
Āḍarekhā	horizontal ground-line
Āḍaśaṅku	horizontal tenon
Āḍasari	horizontal extension
Agni-rakṣā piṇḍi	altar for entertaining the sacrificial fire
Akhacūḷi-pharuāmuṇḍi	axle, hub of the wheel
Akhamuhānti	front or face of the axle
Ālamba (mālā)	hanging (garland)
Ālambabandheni	pillar ornamented with hanging garlands
Alasā-bāḍa	wall projecting on both sides of the portal
Alasā-kanyā	youthful female figures
Alāśrī	see āmalaka
Āmalaka	the stainless, crowning part of rekhā-temples in form of a flat melon or ribbed cushion, see App. No. 7
Āmalakī	small āmalaka, especially those punctuating the line of the koṇaka
Āmalakī muṇḍei kanyā	crouching female figure supporting the āmalaka
Amala paṭṭi	plate supporting the āmalaka
Aṁśa	part, section, vertical struts or mullions of the beki
Aṁśa-rekhā	vertical stepwise recesses on wall or pilaster
Aṅgana	inner courtyard, sometimes written agaṇa
Aṇikili	linch-pin, plug
Anurāhā	narrow vertical wall-element between koṇaka and anartha or between rāhā and anartha
Anartha or Anuratha	vertical wall element, running from base to top of the śikhara and from base to bandha-melāna of the mukhaśālā
Ara or sāla ara	wheel-spoke; āḍa ara—thin spoke
Ara-gaṇṭhi	knot in the middle of the spoke
Ara-pheṇa	triangular projection on the outer surface of the knot
Ara-yantta	diagram showing the wheelaxles
Āsana	seat or pedestal, also seated posture
Aśrā-khamba	facetted pillar

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Aṣṭa-bhadra	eight-faced or eight-sided
Āvaraṇa	closing, covering, surrounding
Āvaraṇa Devatā	secondary divinities, called Pārśva-Devatās placed on the outer side of the main shrine for its protection
Āvarta	enclosure
Āyudha	emblem of the Deva crowning the temple, being one of his weapons or attributes
	B
Bāḍa	wall
Bāḍanta	end of the wall, its uppermost part below the śikhara or pīḍha-roof, made with horizontally projecting bands, the bandhameḷāna
Baiṭhi	seat, small pedestal
Baiṭhi-cāḷa	flat roof
Baiṭhi-kumbhī	āmalakī-like support of the lotus emblem on top of the kalaśa
Baiṭhi-muṇḍi	supporting top
Bajantarī-kanyā	figure of female musician
Bājeṇi-bandha	row of figures of musicians
Bājeṇi maṇḍapa	pavillion for the temple musicians
Baḷā or baḷī	roll-moulding, round moulding or astragal
Baḷaya	iron-ring around egārupaṭṭikā
Bandāpanā-maṇḍapa	maṇḍapa in which light offerings (ārati) with sweets and flowers are done by two pujārīs; see Nāṭamaṇḍapa
Bandha	group or row
Bandhamāna or bandhameḷāṇa	horizontal bands crowning the wall below roof or śikhara
Bandha-mūrti	image of love-couple
Bandhanā	string-course, cornice, horizontal mouldings on the wall
Bandhenī	outer of two pilasters of the pratiratha
Bāṅkāpaṭi	trefoil arch
Barāṇḍi	vertical wall-part
Barati	lower walls
Beḍha	pathway, pavement, compound, also flat vertical surface
Beharaṇa maṇḍapa	ceremonial maṇḍapa for special functions
Beki, beka or kaṇṭha	neck of the rekhā temple between śikhara and āmalaka
Beki-muda	ceiling at the height of the beki, the same as kaṇṭha-muda

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Bhadra kaṇi-pīṭha	see bhadra-piṭha
Bhadrāṁśa	vertical ribs
Bhadra-pīṭha	square groundplan of temple with stepped projections, three, five or seven (see Appendix No. 2)
Bhāga	part, section
Bhaṇḍāra	store-room or treasury
Bhāra-cāla	corbel-roof
Bharaṇā	tenon, also called bhāraṇi śilā
Bharata or bharati	straight wall in the intervals between pīḍha-roofs
Bhitti	wall, also used for foundation
Bhitti-mauli	covering layer of the foundation
Bhoga maṇḍapa	refectory hall of the temple
Bhūmi	course, layer, ledge, tier
Bhūmikā	storey, stage
Bhūpura	square with four doorways enclosing all yantras
Biṭa	frame-work
Boḷajhāñji	decorative water-plant pattern

C

Cāka (Skt.=Cakra)	circle, wheel
Cakra	circle, also in the sense of maṇḍala or yantra
Cāḷa	roof, ceiling
Calanti mūrti	portable image
Cāpa-prastāra	covering stone
Cāpuāni	metal belts of egāru paṭṭikā, see cumbaka lohā
Cauvarga	four-sided, square, on all four sides
Cirāsiṁha	sedant lion with two bodies to one head, placed on corners of plinth or śikhara
Cūḷa, Cūḷi	top, crest, head
Cumbaka-lohā	iron ring around top and base of egārupaṭṭikā, also called balaya or talānta (see Appendix No. 11)
Chaṇda	tied, entwined
Chaṇda-nāga	entwined serpents or Nāga-figures
Chatraśilā	round stone in form of umbrella closing top of śikhara, see also Appendix No. 6
Chekā-vāṭā	paved covered path

D

Dadhinauti	upper part or cover of the kalaśa
Dakṣiṇa	south or right side
Dāḷi	scroll-work
Dāḷi-kanyā	female figure entwined by scroll-work

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Ḍamaru	hand-drum with two faces and a narrow indrawn waist
Ḍamaru-bhāga	indrawn wall part in form of a ḍamaru
Ḍeuḷa (Skt.=Devakula)	vernacular term for temple
Ḍhāḷiā	crucible for iron-casting (ḍhaḷāi-casting)
Ḍhvaja-padma	lotus emblem crowning the Sun temple
Dhvaja-stambha	tall pole or pillar for the temple-flag, or stem of the lotus-emblem
Dhāra	flat frame-work, vertical or horizontal
Dhāra-pahaṇḍa	projecting wall by the side of the portal
Dhokaḍi	ambulatory, path for circumambulation
Digasāriṇī	diagram of space-direction
Dikpālas	guardian divinities of the eight quarters
Do-phāliā āmalaka	āmalaka made in two layers
Dori or doribaḷā	roll-moulding, narrow flat band or border, horizontal or vertical
Dvāra-bandha	frame-work of portal with ornamental frieze
Dvārapāla	figure of door-guardian, mostly on door-jambs
Dvicāḷiā	roof with two laharas or pīḍhas

E

Egārumuṇḍi or Egārupaṭṭikā	see Appendix No. 11

G

Gaiṇṭhāḷa	wall-part joining vimāna to mukhaśālā, containing the passage between the two
Gajabandha or Gajatarubandha	elephant frieze,
Gaja-macāḷa	Gaja-pīṭha=socle with elephant-friere
Gaja-siṁha	destroyer of the elephant, rampant lion trampling over elephant
Gaṇḍa	swamp or deep place in river bed where water never dries
Gaṇḍi	temple-spire, śikhara
Gāṇḍiābhaṇḍa-siṁha	see cirāsiṁha
Gaṇḍi-piṇḍi	platform on top of the temple-spire below the beki, also called Garuḍa-piṇḍi or śikhara-cūḷi
Gāra	line
Garbha	womb, temple, inner sanctuary, used also for mukha-śālā or any hollow structure
Garbha-gaṇḍi	spire above the sanctuary
Garbhagṛha	sanctum, innermost shrine

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Garbha-mandira or garbhakā	śikhara, either rekhā, pīḍha or khākara
Garbha-meḷāna	see bāḍānta, junction of wall and spire
Garbha-rekhā	outline of groundplan, outer limit of the wall
Garbha-siṁha	sedant lion on the beki
Gavākṣa	clerestory, mullioned or latticed window
Gelabāi	ornamental motif of female figures entwined in creepers and scrolls
Geṭi	broken stones or large gravel
Ghara-lahari-muda	hall with corbelled roof
Ghaṭa pallava stambha	vase and foliage pillar
Gherā	circumference
Ghosarā, ghosarā pāhāca	sloping path, side-walls of the big stairways
Gṛha	house, niche, cavity, enclosed area
Gumuṭa	open pavilion or maṇḍapa with a passage
Guṇḍikā	bead or bead-work
Guṇḍikā-beḍha	string of beads
Gurujā	small round fortification tower in corner of compound-wall
Gurujaṭāṇa	solid, in one piece, strong like a guruja
	H
Hasta-aḷasā mūrti	crouching figure supporting the āmalaka, also called hasta-aḷasā mundia mūrti,
Hāṇḍirakhā or-rakṣā	platform on which cooking vessels are kept
	J
Jagamohana	front-hall of the temple, giving access to the public for seing the image inside the shrine, also called mukhaśālā
Jalā	net-work, fret-work, trellis
Jalādhāra-beḍha or jaladhāra-bhūmi or jalādhāra-bandha	surface covered with decorative trellis-work as on certain śikharas
Jāli	small network, made of squares, like a chess-board, fret-work
Jāṅgha	lit. the shin, projecting vertical elements on the wall
Jāṅgha-meḷāna	see bāḍanta
Jhalama	recess, cavity, depth
Jāunḷi-dokhandia	pair of dovetailed stones
Jhulā	projecting, over-hanging part
Jogāniā agana	open courtyard

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K

Kaḷāghāṭa	Brahmasthāna in the center of the sahasrāra cakra
Kaḷāghāṭa-dvāra	door to the main shrine
Kalaśa or Amṛta kalaśa	vessel on top of the temple, containing the elixir of Immortality filled with consecrated substances and itself consecrated with mantras
Kalaśa-nauti	lower half of the kalaśa
Kalaśa-pāda	foot of the kalaśa
Kāṅgulā or medhā-kāṅgulā	battlements crowning the compound wall
Kaṇi	edge, pointed projection
Kaṇiphuliā or rāśiphulia kaṇi	projecting circular ledge with indented outline above the mouth of the kalaśa
Kaṇṭha	neckpart or beki of the temple
Kanyā	girl, female figure
Kanyā-ghara	niche with female figure
Kāṭhi-ara	stick-like spoke
Kāṭhigāra	division on the measuring rod
Kautuka-mūrti	composite hybrid animal creating wonder
Keli-bandha	frieze of playful or amorous scenes
Keśara	filaments
Khambha	pillar or pilaster
Khamba-pīṭha	also called khumba-piṭha, bracket pedestal
Khaṇḍi	chamfer, cleft, groove, interstice
Khaṇḍiregāra	line of khaṇḍis
Khaṇḍitāṁśarekhā	oblique line of outer triangular antefixes on the edges of a pīḍharoof
Khapuri	(Skt. kharpara) stone slab covering the āmalaka, see Appendix No. 8
Khila	wedge or stem
Khila-bharaṇā	tenon of lion-figure fitted into the wall
Khila-padma	lotus-emblem with a stem
Khila-pathara	round stone hollowed out to receive posts of scaffolding
Khumba	pillar (like khambha)
Khumbi	small pillar
Khura	first element of pañcakarma, in form of a hoof
Kīla	peg
Koṇa	corner, edge
Koṇaka	corner part of a temple
Kṣetra	field, area, part

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Kumbha	pot, vessel, lower part of the kalaśa, second element of the pañcakarma
Kumbhi	small pot or vessel
Kūṭa	small roof-like crowning peak or top, may also mean a particular part of the roof
	L
Lahara	wave, said of corbelled roof
Lahara-cāla	corbelled ceiling or roof
Lahara-muda	coping stone covering and closing corbelled roof
Laharī	dimunitive of lahara
Latā-bāḍa	wall with creeper ornamentation or scroll work
Latā-bandha	scroll work on horizontal frieze
	M
Makara	legendary animal resembling a crocodile, but with a proboscis, vehicle of Varuṇa and Gaṅgā used on the side of the bāṅkāpaṭi and also as gargoyles for the outlet of the pūjā water
Maṇḍala	circle, diagram, any circular circumscribed area, but used also for square yantras
Maṇḍapa	small pavillion or temple on pillars with open sides and covered with a pīḍha-roof
Mandira	temple or shrine in general
Māpaguṇāgāra	made according to plan and measurement
Māraṇi	recess in form of a ḍamarū with rounded edges
Mātaṅga-māla	row of elephants
Mattavarani	raised platform above the basement of the Naṭa-maṇḍapa
Meḷāna	meeting-place of two different architectural elements
Mithuna	love image
Muhāṇṭi	narrow frontal vertical surface, border of pīḍha-roof, also written muhāṇṭa
Muda	seal and ceiling
Muda-beki	beki above the ceiling of the vimāna
Muda-bharaṇī	coping stone closing the ceiling
Muda-garbha	ceiling of the garbha
Muda-bhāga or mudala-piḍha	ceiling roof
Muda pathara or muda śilā	coping stone
Mudrā	seal
Mudraka	crowning or sealing element
Mukha-maṇḍapa or Mukhaśālā	front hall of temple, see Jagamohana

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Mūla-bhāga	root part, unit of measurement governing the proportions of a building
Muṇḍai-kanyā	crouching female figure, supporting the āmalaka on top of the mukhaśālā
Muṇḍa-pathara	stone closing top of śikhara, see Appendix No. 6 on chatraśilā
Muṇḍi or Muṇḍali	crown, head
Muṇḍi-baiṭhā	see Muṇḍa-pathara

N

Nāga	serpent
Nāgabandha	friezes of intertwineds erpents,
Nāga-kanyā bandha	serpents wound around pillar, their upper part being in human shape
Nandāvarta (ānandāvarta)	circular stone-steps at entrance of temple or at entrance of mukhaśālā
Napuṁsaka śilā	plain, undecorated stone-seat for the image above the pedestal
Narabandha	frieze of human figures
Nārī-ghara	niche with female figure
Nāṭamandapa or nāṭamandira	dance-temple, also called bandāpana maṇḍapa
Nauti	vessel, kalaśa; taḷa-nauti=its lower part; dadhi-nauti= its upper part
Navagraha	stone lintel with the images of the nine planets above the portal
Niśā	niche, cavity
Niśā-śikhara	śikhara above the niche or above the niśā-temple
Niśā-maṇḍapa	side-temples attached to the main shrine containing the Pārśva-Devatās
Nṛtya-bandha or nṛtta-bandha	row of dancers, frieze of dancing figures

O

Oḷadhāra	oblique line formed by the antefixes of the pīḍhas on the pyramidal roof of the mukhaśālā

P

Pāda	foot, base
Pāda-vinyāsa	groundplan
Padma	lotus, specific attribute of the Sun-god
Padmāsana	lotus-seat

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Padmakaṇi-tumba or Padma-tumba	wheel-nave carved in the shape of an open lotus
Padma-khapuri śrīnuṇḍi	base of ālaśrī in form of lotus-petals
Padma-patra-bandha	lotus leave frieze
Padma-pīḍha or cāḷa	lotus-moulding on horizontal roof
Padma-piṇḍi	lotus-socle or pedestal, also called padma-pīṭha
Padma-pṛṣṭha	sloping upper surface carved with lotus petals
Padma-puṣkara	lotus-capital
Padodaka kunda	tank for receiving the pūjā water
Pāga	vertical projecting sections of wall on the spire of the temple
Pāga-śikhara	small ornamental shrine on the anuratha of the temple
Pāhāca	steps
Pahaṇḍa	berm, open platform around the base of the temple; compounds : aḍaṅga-pahaṇḍa=platform attached to a building; ghasā-pahaṇḍa = narrow platform projecting from a building by the side of a stair-way or otherwise
Pai	felly of the wheel
Pākhuḍā	petal, compound : pākhuḍā-beḍha, pākhuḍā-dhāra= lotusborder
Pañcakarma	five architectural elements forming the base of all Orissan temples : khura, kumbha, kaṇi, ḍamaru-bhāga, vasanta
Pāṭa	long slab, lintel or beam
Paṭṭa or Paṭṭi	narrow band or flange
Pathara	stone
Paridhi	circumference
Pāyā	foot, step of pīḍha
Pharuāmuṇḍi	see akhaculi
Pheṇi	cyma recta, profile with a double upward curve, like the hood of a cobra
Phenia pathara	stones with indented edges
Pheṇi-cāḷa	inner side of corbelled roof with rounded corbels
Pheṇi padma cūḷa	covering roof of niches in a double curve carved with lotus-petals
Phuli	indented ornamental part of bands forming the courses of the garbhameḷāna
Pīḍha	horizontal courses forming the pyramidal roof
Pīḍha-cāḷa	roof composed of pīḍhas
Pīḍha kanyā	female musician on the mukhaśālā-roof

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Pīdha-maṇḍala	series of pīḍhas
Piṇḍi	pedestal, base, plinth
Pīṭha	base, substructure, pedestal, also said of whole temple
Pīṭhika (diminutive)	crowning of niche or socle of statue in the wall
Pīṭha-barāṇḍi	wall above the pīṭha
Pītha-muhaṇṭi	face or front of the base
Piyāniyā khapuri	smooth, plain khapuri without a decoration
Pokhariā	garbhagṛha, sanctuary; ratnamāla pokhariā=sanctuary of the Jewel-Garlanded (Sūrya)
Poṭaḷa	small shrine with walls, one door and pīḍha roof, no pāgas, no pillars
Prabhā or prabhā-baḍa	vertical support behind statue
Prabhā-maṇḍala	ornamental framework around the images of divinities
Pramāṇa	measure, proportion
Pradakṣiṇa patha	path for circumambulation of the shrine from right to left
Prāsāda	the whole temple comprising vimāna and mukhaśālā
Prastara	stone, entablature
Prastha	width, breadth
Pratiratha	small ratha between broader ones, here also narrow wall-pilaster, inner of two conjoined wall-pilasters with mithunas
Pṛṣṭha	back, slanting roof, covering cornice
Puṣkara	lotus, compound : Puṣkara-pīṭha=base in the shape of lotus petals
Pṛṣṭha-puṣkara	rooftop in form of lotus-petals

R

Rāhā	central broadest projection of temple-wall and spire holding the images of the Pārśva Devatās
Rāhā-bhūmi	single tiers or ledges composing the rāhā
Rāhā-siṁha	figure of lion projecting from the rāhā
Rāja-bandha	frieze with mundane scenes of hunting, fighting, royal processions, etc.
Randhra	hole, cavity, small opening in the uppermost part of the rāhā-pāga of the śikhara
Raṅga-pīṭha	naṭamandira
Rasa-bandha	love images
Rāśi cakra	circle of constellations, see Appendix No. 18
Rāsi-phulia kaṇi	triangular projection from a flat band
Ratha	chariot; also another name for pāga
Ratha-deuḷa	temple in the form of a chariot

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Rathaka	small maṇḍapa with a pīḍha or ṭhia-śikhara roof on the temple-wall, for Dikpālas and other images
Ratna muda kalaśa	the sealing kalaśa with the precions stones
Ratnapeḍi muda	upper part of kalaśa, covering the precious stones and other emblems contained in the kalaśa
Ratna-piṇḍi	pedestal for the pūjā-image
Ratna-siṁhāsana	lion-throne for the pūjā-image
Ratna-vedi	jewel altar of the presiding deity of the temple
Rekhābhūmi	flat layer or course
Rekhā-jali	fret work with straight lines
Rekha-deuḷa	temple with a single straight spire
Rekha-śikhara	straight spire
Sākara or Sākara-paṭa	lintel with upright compartments for figures of Sūrya and his female attendants
Śālā	hall, ex. mukhaśālā=front-hall
Sama-vartula-pīṭha	flat āmalaki
Sandhi	junction, sandhi-sthala=general term for any place where two different architectural elements are joined together
Śaṅku	gnomon, vertical peg set in the center of the building-ground according to whose shadow space-directions are determined
Saraba	cover-lid of kalaśa
Senāpaṭa	armour, breast-plate
Śikhara	vimāna, tower above sanctum of the temple, also small turrets as architectural motifs, called beḍha-śikhara
Śikhara-cūḷi or viṣama	indrawn oblique part on top of śikhara
Śilā	stone
Śilā-padma	stone lotus
Siṁhāsana	lion throne, given to seated divinities or royal figures as a sign of power and authority
Siṁha baiṭhi	bracket pedestal for lion on the rāhā
Simha kaṇi	raised edge
Śrīgaṇḍi (piṇḍi)	crowning of the pīḍha-roof of the mukhaśāiā in form of a ribbed or fluted bell
Śrīpiṇḍi	base of the śrī-gaṇḍi
Stambha	pillar
Stambha-cūḷi	pillar-capital
Suāsa-baiṭhi	plain pedestal
Suāsa barata	protecting wall
Sūci-karma	lit. needle-work, delicate chiselling in stone

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T

Taḷa	horizontal level, base, lowest part of any architectural element
Taḷa barāṇḍi	lowest vertical wall-portion above the pañcakarma
Taḷa jāṅgha	the same as above
Tala-nauti	see nauti
Taḷa pattana	pavement
Taḷa pṛṣṭha	lowest tier of a plinth
Ṭhiā	upright, ṭhiā jāli=upright trellis-work, ṭhiā culli= standing oven, ṭhiā śikhara=small śikhara with upright ribs as wall-element
Toraṇa	portal, monumental doorway
Tribhaṅga	triple curve
Trimuṇḍi cūla	a small vajramuṇḍi
Trimuṇḍi śikhara	pyramidal turret on the pīḍha-roof above the portal of the mukhaśālā
Trimuṇḍi vajramastaka	see Vajramastaka
Trichādiā	roof with three laharas or pīḍhas
Tumba	nave of wheel

U

Ucchiṣṭṭāṁśa	central portion of earth remaining as the ground of the temple, after the place for foundations has been dug.
Uḍā-gajasiṁha	rampant lion upon prostrate elephant
Uḍā-siṁha	jumping lion, rampant lion
Ugrapaṭṭikā	see egārupaṭṭikā, Appendix No. 11
Ūrddhva	upper, upwards
Utsava-mūrti	portable image of metal or wood for festive occasions and processions

V

Vajramastaka or Vajramuṇḍi	big circular ornament carved at the base of the śikhara to which great sanctity was attributed as the protector of the temple
Vajramuṇḍi-cūḷa or rathaka	same motif in smaller size adorning lower part of koṇaka-bhūmis
Vallabha-piṇḍi	raised passage inside the gaiṇṭhāla for placing the utsava mūrti
Varta	round steps in front of entrance, see nandāvarta
Vartula	round, circular
Vasanta	horizontal flange with creeper and flower carving, uppermost part of pañcakarma

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Vaṭa	sacred banyan tree
Vāṭa	way, passage, door, entrance
Vedi	altar or pedestal
Vijaya-dvāra	main entrance, portal of victory, also called vijaya-vāṭa, entrance to the garbhagṛha
Vijaya piṇḍi	pedestal of the pūjā-image in the temple,
Vijaya pratimā	portable image
Vimāna	the main temple, including shrine and spire
Vimānikā	small śikhara on the wall, with pheṇi, pīḍha, gṛha and kalaśa
Virāja	rampant lion
Virāja-bandha	row of rampant lions
Virāla	the same as virāja
Viṣama	oblique, slanting, uneven; uppermost slanting part of the śikhara below the beki
Vistāra	width, breadth
Viśvakāṇḍa	16-cornered, viśvakāṇḍa stambha=16 cornered pillar
Viśvavartuladhāra	see āmalaka

Y

Yantra	symbolic diagram of divinity used in tāntric worship and meditation; drawn also inside the foundation of temples
Yojaka	paved way connecting two buildings
Yuddhabandha	frieze with fighting scenes
Yūpa	sacrificial post commemorating the consecration of a temple, a well, a tank, a house or other building

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II. DIVINITIES

A

Aditi	the Universal Mother or Creatrix
Āditya	the twelve sons of Aditi, the twelve aspects of the Sun God
Agni	the God of fire in the Vedas, later also guardian of the south-eastern quarter
Aja	the "Unborn", an epithet applied to many Gods, primarily to Brahmā
Aṁśumālin	"the One garlanded with rays", an aspect of the Sun God
Aṁśumān	"the Possessor of rays", another aspect of the Sun God
Apsarases	Nymphs of Indra's heaven, beautiful and voluptuous, wives of the Gandharvas
Aruṇa	the Charioteer of the Sun God, preceding the rising Sun, the eastern Pārśva-Deva of the Sun temple, see Dhyāna in App. No. 20
Aryaman	Epithet of the Sun God, one of the twelve Ādityas
Asuras	the adversaries of the gods, the "fallen Angels" according to Coomaraswamy
Aśvins	Two horse-headed sons of Sūrya and Sureṇu, the divine Physicians
Aton	Egyptian Sun God, adored by King Akhnaton as supreme divinity in the 14. Century B. C.

B

Bhaga	an aspect of the Sun God, one of the twelve Ādityas
Bhairava	terrifying aspect of Śiva, sometimes also grotesque figures are called so in popular parlance
Bhānu	an aspect of the Sun God, connected with the month of Vaiśākha
Bhāsamāna, Bhāsvān	"the radiant, shining one", epithet of Sūrya
Bhāskara	supreme, all-comprehensive form of the Sun God
Brahmā	the personified World-Creator
Brahman	the unpersonified universal creative Principle
Brāhmī or Brahmāṇī	Śakti of Brahmā

C

Chāyā	one of Sūrya's Śaktis, the earthly aspect of Mahāmāyā

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D

Dadhivāvana	a form of Jagannātha, see note in Baya Cakaḍā, p. 92
Dakṣa	Universal Progenitor, consort of Aditi
Daṇḍanāyaka	Skanda, son of Śiva, the Warrior god, here punisher of evil-doers in the world of the dead
Deva or Devatā	general name for all divinities
Devī	a goddess, or female divinity
Dharma, Dharmamūrti	divine Protector of the Law, in Orissa also Sun God, see worship of Dharma in Introduction, para No. 7
Dhātā, Dhatṛ	a name of Brahmā, as the Creator or Demiurge in the Ṛgveda
Dikpālas	the Guardians of the different space-directions
Dikpāla Patnī	the Śakti of a Dikpāla
Divākara or Divasa	the Maker of the day, the Sun God
Durgā	Śiva-Śakti, the fighting goddess, killer of the buffallo-demon
Dvārapāla	door-guardian of a temple or any other holy ground
Dyauḥ	Goddess of heaven, in the Vedas associated with Sūrya

G

Gabhasti	one aspect of Sūrya, in the month of Śravaṇa
Gaṇa	attendants of any divinity, especially of Śiva
Gaṇeśa	the elephant-headed god, son of Śiva, Chief of Gaṇas Remover of obstacles
Garuḍa	the bird vehicle of Viṣṇu, twin brother of Aruṇa
Gāyatrī	a) Brahma-Śakti or Sūrya-Śakti b) Mantra of 24 syllables from the Ṛgveda, daily prayer of the Brāhmaṇas to the Sun God
Gaṅgā	Goddess riding on a makara, daughter of the Himālaya, personification of the river Gangā
Ghaṇṭākarṇa-Bhairava	Three–faced Protector of the temple, see App. No. 12
Go	Vedic term for the sky, Sūrya-Śakti

H

Haridaśva or Haritpati	the Sun God, riding on a golden horse, Pārśva-Deva on the northern side of the temple

I

Indra	King of the gods in the Vedas, later guardian of the eastern quarter
Īśāna	originally a name of Śiva, then he became the guardian of the north-eastern quarter

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J

Jagannātha	Lord of the world, name given to Viṣṇu-Kṛṣṇa, as chief divinity of the Puruṣottama temple in Purī

K

Koṇāditya	the Adityā of the Agnikoṇa, the Sun God of Koṇārka
Kṛṣṇa	eighth avatāra of Viṣṇu, often represented as the flute-playing cow-herd, surrounded by love-lorn Gopīs (milk-maids)
Kṣetrapāla	Protector of the field or region, also an epithet of Śiva figured in the lower shrine of the southern niśa temple at Koṇārka

L

Lakṣmī	Goddess of prosperity, as Gajalakṣmī she is represented seated between two or four cloud-elephants sprinkling rain water over her. She is mostly accociated with Viṣṇu

M

Mādhava	a name of Kṛṣṇa or Viṣṇu
Mahābhāskara	see Bhāskara
Mahādeva	the Great God, mostly used for Śiva
Mahālakṣmī	see Lakṣmī, here addressed as the supreme Śakti
Mahāmāyā or Mahāgāyatrī	the most important Sūrya-Śakti, to whom the Devī temple in Koṇārka is consecrated
Mahāyama	the great God of Death
Maheśvara	the Great God, epithet of Śiva
Maheśvarī	Śakti of Śiva
Makara	crocodile with a proboscis, vehicle of Varuṇa and of Gaṅgā
Manu	name of each of the fourteen progenitors of mankind and rulers of the earth; each age (manvantara) has its own Manu
Māsa	Month, attendant on Sūrya in personified form
Mātṛkās	Divine Mothers, in tāntric worship, originally 7 or 8, later 16 in number.
Mitra	"Friend" one of the Sun God's names in the Vedas, Pārśva-deva of the southern quarters in Koṇārka, aspect of Sūrya in the month of Mārgaśirṣa

N

Nāga	Serpent god, earth divinity
Nāga-kanyā or Nāginī	Serpent goddess

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Nārada	Devarṣi wandering with his vīṇā, known for his pranks and intrigues
Narasiṁha	the Man-Lion incarnation of Viṣṇu who delivered the three worlds from the tiranny of the demon Hiraṇyakāśipu
Nārāyaṇa	Name of Viṣṇu in his highest, all-embracing form
Navagraha	the nine Planets
Nikṣubhā	like Chāyā a Sūrya Śakti in her earthly aspect
Nirañjana	"the Stainless" divine epithet mostly used for the Sun God

P

Pārśva Devatā	secondary aspects surrounding the main divinities on the temple walls, which also receive worship
Pārvatī	consort or Śakti of Śiva
Prajāpati	the same as Dakṣa, the Progenitor
Pṛthivī	Earth Goddess
Puruṣa	Primordial universal being, by whose sacrifice or dismemberment the human race was created, see Puruṣa sukta. Ṛgveda X. 90
Pūṣan	the great Nourisher, one of the aspects of the Sun God, here Pārśva Deva of the western side.

R

Rājñī	celestial Sūrya Śakti
Rākṣasa	demon, evil spirit, goblin
Rāmacaṇḍī	another name used here for Mahāgāyatrī
Rātri	Goddess of the night, another Śakti of Sūrya
Ravi	an Āditya, one of the twelve principal aspects of Sūrya, assumed in the month of Āṣāḍha
Ravinārāyaṇa	Sūrya-Viṣṇu, showing the solar character of Viṣṇu
Re or Rā	Egyptian Sun God in Thebes
Revanta	Son of Sūrya, represented as a hunter god on horseback
Rudra	ancient Vedic God, the "Howler", god of storm and thunder, later epithet of Śiva in his destructive form, aspect of Sūrya in the month of Jyestha

Ś

Sadāśiva	a very auspicious and benign aspect of Śiva
Śakti	in tāntric doctrines female counterpart or consort of any divinity

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Śāmba	son of Kṛṣṇa, connected with the creation of the oldest Sun temples in India, see Introduction, para No. 6
Śambhu	"the Giver of Prosperity", one of the epithets of Śiva
	S
Samjñā	heavenly form of the Sūrya-Śakti
Samvatsara	the Year, personified, attending on the Sun God
Sandhyā	Goddess of the setting sun, the twilight, evening glow
Sāranyū	equivalent to Samjñā
Sarasvatī	Goddess of speech, learning and wisdom, Brahma-Śakti, here Śakti of Sūrya
Savarṇā	"the Female of like appearance", the earthly double of Sureṇu, consort of Sūrya, see Introduction, Para No.5
Sāvarṇi-Manu	Son of Sūrya and Savarṇā, the Law-giver of the future Manvantara,
Savitā or Savitṛ	one of the aspects of the Sun God in the Vedas
Sāvitrī	generally Consort of Brahmā, here in the function of a Sūrya Śakti in the Mahāgāyatrī temple
Siddha-Caṇḍikā Siddha-Durgā	other names used in these texts for Mahāgāyātrī
Shamash	Persian Sun God
Skanda	Six-headed warrior god, the son of Śiva, here in the form of Daṇḍanāyaka, see above
Sureṇu	heavenly Śakti of Sūrya
Suvarcasā	equivalent for Samjñā and Saranyū
Sūrya	Sun God, aspect of the Sun in the month of Phalguṇa
	T
Tārakādhīśa	Lord of the Constellations, here attribute of Mitra, the Pārśva-Deva of the southern side
Ṭhākurāṇī	general term for a Devī
Tvastṛ	the divine Carpenter, Architect of the universe, also called Viśvakarman
Tvāstrī	Daughter of Tvastṛ, also consort of Sūrya
	U
Uṣas	Goddess of dawn, consort or Śakti of Sūrya preceding Sūrya on his course
	V
Vaiṣṇavī	a Viṣṇu-Śakti
Vaivasvata-Manu	the Manu of the present age
Vāmadeva	a name of Śiva
Vālakhilyas	Pigmy sages replending in the rays of the Sun

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Varuṇa	in the Vedas Lord of the gods, later god of the ocean and guardian of the western quarter
Vāyu	in the Vedas god of the winds, later guardian of the north-western quarter
Vāyu Patnī	Consort of Vāyu
Vedāṅga	aspect of Sūrya associated with the month of Caitra
Vidhāta or Vidhātr	God of creation, Brahmā or Dhātṛ
Vijaya	appears always together with Jaya, they are guardians of doors and portals
Vilāsinī	one of the 64 Yoginīs
Vināyaka	another name for Gaṇeśa, the Remover of obstacles
Virāla or Virāja	symbolical animal, lion with elephant-or antelope-or griffin-head
Viśvakarman	the All-Creator, another name of the Architect of the universe
Viśvanātha	Śiva's name as Lord of all the worlds
Viśvarūpa	the omniform Universal Being, aspect assumed by Kṛṣṇa in front of Arjuna on the battle-field of Kurukṣetra

Y

Yakṣas	semi-divine beings, tutelary spirits since pre-buddhist times, later attendants on Kuvera, their Chief
Yama	god of death and judge of the dead, son of Sūrya and associated with his aspect in the month of Bhadra
Yamī	Yama's twin sister
Yamunā	Goddess riding on a tortoise personifying the river Yamunā
Yogeśvara Sadāśiva	Śiva as the Lord of Yoga, seated in Yogāsana

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III. PATRONS AND ADMINISTRATORS

Mahāśrama or Paramamahāśrama	the Great Refuge, in Orissa ancient designation of kings, here used for Mahārāja Narasiṁha Deva I of the Gaṅga Dynasty. All his other titles can be found at the beginning of the Baya Cakadā and the Karmaṅgi, and also at the end of the Baya Cakaḍā
Pāṭamahādevī	the Chief Queen
Mahādevī	mostly used for the second Queen Sītā Devī of Malva
Rājamātā Pāṭamahādevī	Kastūrikāmodinī, the Queen Mother or Dowager Mahārāṇī
Sahasramalla (Suāsamalla)	Brother-in-law of the Mahārājā, commanding Chief in the army
Āḍhatiā	Auditor of accounts
Aṅgai Nāyaka	personal representative of the Rājā, here he figures also among the Śilpīs
Baḍajenā	Administrator of five villages or one maṇḍala, appointed officer (for military affairs ?)
Baḍumahāpātra	Brāhmaṇa who carries the prasāda from the big temple of Jagannātha to the Rājā or to other temples
Balaśrī	Minister
Baya Karaṇa	Accounts Officer
Bhaṇḍāra Nikāpa	Treasury Officer
Bhramarabara	Royal title of an Officer in charge of organization or administration
Biśoi	Administrator of two maṇḍalas or one biśa
Paramabiśoi	Chief of several Biśois
Buḍhāleṅkā	Military Commander
Ciṭāukaraṇa	Secretary, scribe
Daḷabeherā	Hereditary Chief of an area
Deuḷakaraṇa	Chief Supervisor of the temple
Gaḍa Nāyaka	Administrator of a fort
Gauntiā	Village Headman entrusted with the collection of taxes
Kañcuki Karaṇa	Secret Intelligence Officer
Koṭhakaraṇa or Deuḷa Koṭhakaraṇa	Manager of a temple belonging to the royal family
Koṭhapañca	Judicial body of five, settling disputes, corresponding to the Pañcāyat of today

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Mahāmātra or Mahāmātya	Chief Minister
Parichā	Inspector, Supervisor
Baḍa Parichā	Chief Supervisor or Superintendent
Pati Mahāpātra	Sevaka of Lord Jagannātha in charge of distributing prasāda of the deity to the public
Purohita	Officiating Priest
Rājāguru	Priest and Advisor of the Maharājā
Sāmanta or Sānta	Feudatary Chief
Sevaka	attending Priest, inferior Brahmaṇa
Śistukaraṇa	General Tax Collector
Upādhi Nāyaka	Manager of any Institution
Vaidya	Ayurvedic Medical Officer

IV. ARTISTS AND ARTISANS

Cinhura or Baiṭharu	Goldsmith
Citrakāra	painter
Cunura	Plasterer
Jālikāra	Specialist in fretwork carving
Kamarakanta	Iron caster
Kansāri	Brass-and bronze-caster
Kārigar	General term for artisan, here specially stone-worker
Karmakāra	Executive Architect
Kaṭali Nāyaka	Head of stone quarriers
Mahāpātra or Mahārāṇa	Title of any qualified Architect or Sculptor or other artist
Pathara cinharā	Stone specialist or expert
Pathara kaṭāniā	Stone quarrier
Pathara risālyā	Man arranging stones on the ground, in the order in which they are wanted in the construction
Pathuriā	Man who cuts stones to their architectural shape, term sometimes also used for sculptors
Rathakara	Chariot-builder
Śilpī	Artist who masters both architecture and sculpture
Śilpi Nāyaka	Hereditary Chief of a community of Śilpis
Śilpa-śāstra-vakhāniā	Instructor in Śilpa Śāstras
Sthāpaka or Sthapati	qualified Architect and Sculptor
Sūtradhara	"Holder of the thread", chief Architect, responsible for the entire construction and all its details
Swāṅsyā pathuriā	Inferior pathuriā, stone-mason, who cuts stones to size

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V. GENERAL WORKMEN AND SUPPLIERS

Bāliāḷa	Man removing sand with sand-plough
Bhāṭa	Herald, public proclaimer
Bhāṭia	Man working the bellows in the foundry
Cāpadalāi	Leader of the boatmen
Cāpuā	Man navigating the cāpas, boatman
Cāruā	Builder of cāra or scaffolding
Cirāḷiā	Man directiog the rhythm of collective efforts with the cry of "Haribol", especially when big weights are to be moved or raised
Dagara Pāika	Letter-carrier
Diṅguriā	Drummer playing the deṅgurā, small drum played with sticks
Gāruḍiā	Assistant of Vaidya (medical officer)
Ghoḍā salyā or Ghoḍiāla	Horse-groom
Hātiāla	Mahout, keeper of elephants
Jogāṇiā	Man responsible for supplying the materials needed in the construction
Karātiyā	Wood sawyer
Mahari	Temple dancer
Māpuṇi	Measurer, controller of stores
Mina Nāyaka	Master of temple dancers
Masāliā	Torch bearer
Paḍhiāri	Door guardian
Pāika	Police guard
Pāitāḷa	General worker, ordinary stone-cutter
Paiṭunī	Female labourer
Paṇiā	water supplier
Pāṭerā	supplier of trāsas and fans
Pathara buhāḷi	stone carriers
Pathara gaṇatiyā	Stone tallymen, counting stones on the work-site
Pathara pāitiā	Stone tallyman, counting stones on arrival on the cāpas
Patuāri	Organizer of a procession
Phaudāra	Minter
Śagaḍiā	Bullock carter
Saṅgiā	Men who transport large stones by sāṅgi

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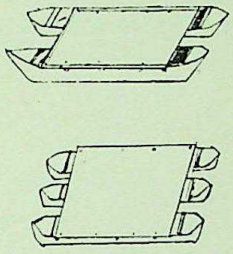
VI. INSTRUMENTS AND CONTRIVANCES

Bhoṭa=a large broad-bottomed boat

Caki=wheel

Cāpa=covered boat, single, double, treble or four fold, connected with planks for the transport of stones on rivers



CĀPA

Cāpuāṇi or cumbaka baḷā=metal belt holding together the two halves of the egārupaṭṭikā, see App. No. 11

Cāra=scaffolding :

āḍacāra=horizontal scaffolding

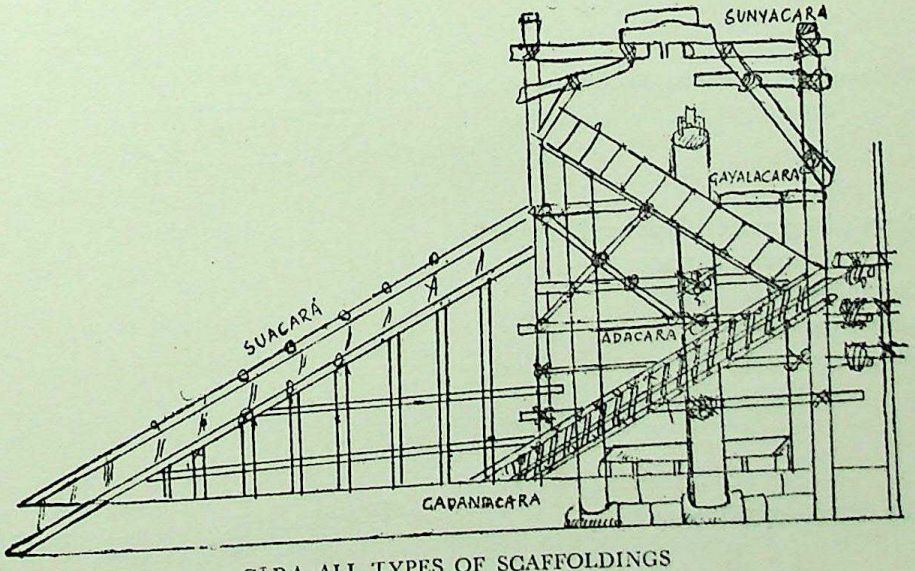
basācāra = scaffolding for seated work

gadāniacāra=sloping scaffolding along the wall

paṭācāra=scaffolding with planks for seated work, also called basācāra

suacāra=sloping scaffolding perpendicular to the wall

śunyacāra=open scaffolding on which the coping stone is hung. See App. No. 6



CĀRA–ALL TYPES OF SCAFFOLDINGS

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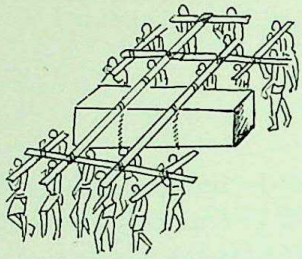
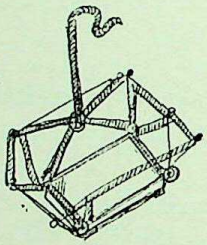
Chekacāra = braces to reinforce scaffoldings

Chekā sāṅgi=extended sāṅgi, see sāṅgi



CHEKA SĀṄGI

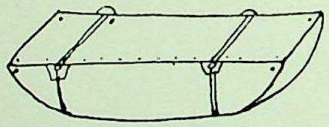
Chekā sikā=plank attached to ropes for lowering stones into the foundation



CHEKA SIKĀ

Dhāraṇā=iron girder or joist
Dhāriṇī=stone or wooden post supporting the smelting crucible

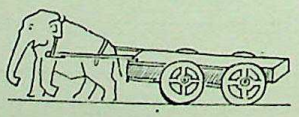
Ḍhola=single river-boat or dugout canoe covered with a plank, a float



ḌHOLA

Dingā = long narrow boat used for speedy transport, a canoe
Garaṇḍā=wooden rollers
Gayaḷa=wooden post
Ghaṇā=grinding wheel for grinding bricks and limestone

Hāti śagaḍi=elephant cart



HATI SAGAḌI

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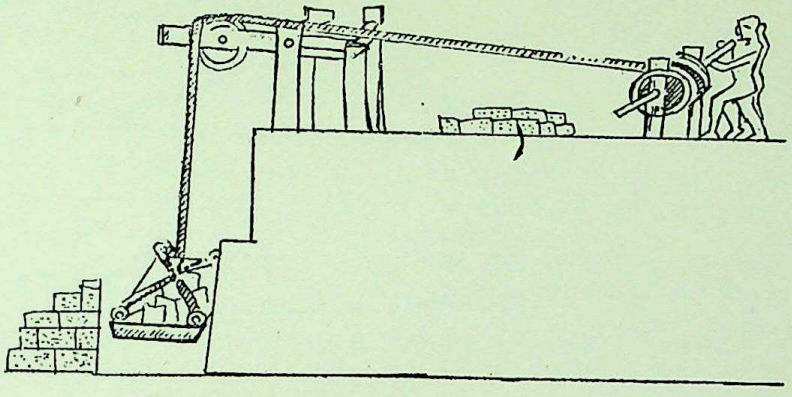
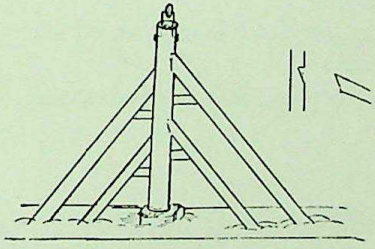
Jhapaka=kind of pulley-crane with rope basket worked by a winding wheel, for lowering stones into the foundations



JHAPAKA

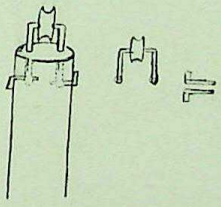
Kāhāla (nāli)=funnel on top of the smelting crucible

Kaḷa cheka=oblique wooden props for the kalagāyala



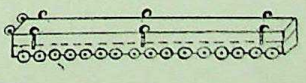
KAḶA CHEKA

Kaḷagāyaḷa=wooden pole with pulley fixed to its top, for lifting heavy stones

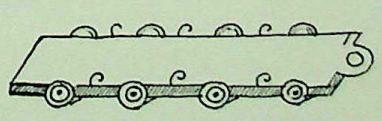


KALAGĀYALA

Kaḷaśagaḍi or śagaḍa=thick plank on wheels for transporting heavy stones



KALASAGAḌI



KALASAGAḌI

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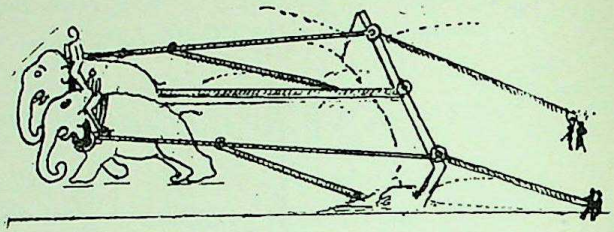
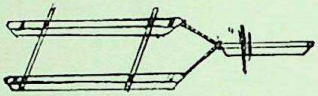
Khāḷoi=sand-plough drawn by elephants



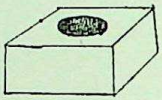
KHALOI

Kheṭa=two boats connected by two narrow planks for transporting wood and bamboo



KHETA

Khīla-pathara=round hollowed out stone for inserting upright standing wooden posts of the kaḷagāyala

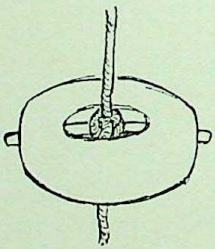


KHĪLA-PATHARA

Koṡali=medium-sized boat covered with planks

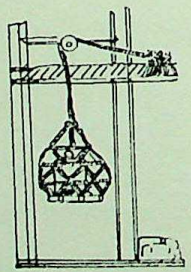
Nāḷa or nāḷi=pipe, channel-mould, canal

Olhāla=ring-like heavy stone with a wooden axle hung on ropes as counter-weight, when lifting large stone-weights



OLHĀḶA

Pathara chandāphāsa=rope-bag for lifting stones



PATHARA CHANDĀPHĀSA

Pimpā or pipā=smelting crucible

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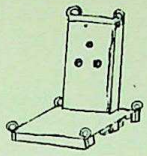
Prabhā=plank with vertical back on which heavy sculptures were tied when they had to be hauled up to their places on the building



PRABHĀ

Śagaḍi=upright framework made of wooden poles with a series of pulleys between them, over which ropes were running for lifting heavy weights

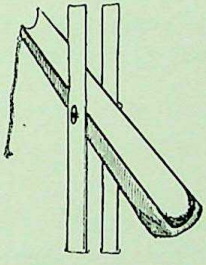
Sāṅgi=poles with hanging ropes carried on shoulders for the transport of heavy stones

Śaṅku=wooden peg placed upright in the centre of the building ground, with the help of whose shadow space-directions were determined

Sikāchaṇḍa=kind of crane with a pulley, from which hung a plank held by ropes worked by a wheel for lifting or lowering stones see also jhapaka

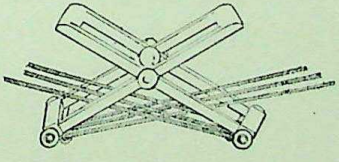
Śisāḍhāla=brass-vessel with a pipe at the bottom, like a watering pot for pournig molten lead

Tāḷateṇḍiā=hollowed out palmtrunk balancing between two poles, used for pouring out sand or gravel



TĀLATEṆḌIĀ

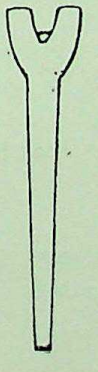
Uṭhāḷiphāsa=two metal-frames hinged together in the centre in the likeness of a reading stand on small wheels which were pulled from opposite directions for supporting or raising big weights, serving the purpose of a jack.



UTHALIFASSA

VII TOOLS AND IMPLEMENTS

Āśā=double pronged wooden pole for pushing upward and supporting heavy stones by hand



ĀŚĀ

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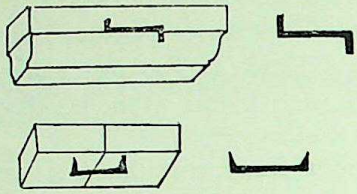
Bāgiā=Iron or copper cramp with parallel points



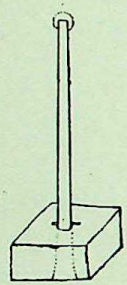
KURADHIĀ

BĀJIĀ

Cumbaka baḷā or cāpuāṇi=iron or copper belt for holding together both halves of the egārupaṭṭikā, see App. No. II

Dāntiguṇitara=chisel with dents

Dhurmuṣa=big heavy pestle with long handle for levelling the ground



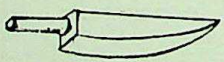
DHURMUṢA

Guṇitara or Guṇṭi=pointed chisel

Kāṭhi=measuring rod, baḍa kāṭhi–large measuring rod

Kāthigara=divisions on the measuring rod

Kobā=small hand-pestle



KOBĀ

Koṇakāṭhi or Koṇacautakāṭhi=measuring rod with a right-angled bent at one end

Korāmuṇḍiā=mallet, hammer

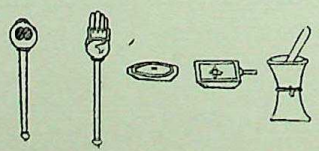
Kuradhiā=metal cramp with prongs in opposite directions (design above)

Masāla=torch dipped in oil

Mūsala=pestle for crushing grain

Phāuḍā=hoe, pharaka phāuḍā=broad hoe

Praṇitā and prokṣaṇī=vessels used in sacrifices for sprinkling water



PRAṆITA
PROKSANI
ŚṚCA
ŚRUVA
MUSALA

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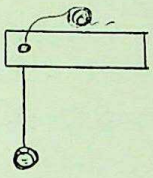
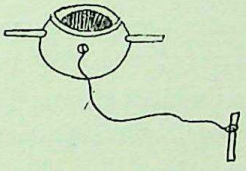
Rampā=flat chisel, scraper
Rasuli=sharp point chisel
Śāvala=iron prong, crow-bar
Śruc and Sruva=different kinds of laddles used in sacrifices for pouring ghee

Sūtrakāṭhi=plummet in form of a flat piece of wood with a hole at one end through which passes the thread with a stone-weight



SŪTRAKĀṬHI

Sutuliā=measuring thread rolled up in a container and issuing through a hole



SUTULIĀ

Udūkhala=mortar used for crushing grain for sacrifices with a pestle called mūṣala

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VIII. STONE VARIETIES USED IN THE KOṆĀRKA TEMPLE,

Chiṭakuṇḍā=rough and porous stone with spots from Tāpaṅga, mainly used in the outer buildings

Kerāṇḍimāliā—whitish stone without spots from Kerāṇḍimāla in Ganjam District, used mainly for the inner walls

Maṅkaḍā—laterite or tuff, from Khurda and Tāpaṅga used mainly in the foundations

Muguni=chlorite of several varieties:

Dhalā muguni=white chlorite used for the sacrificial altar and one image

Nīla muguni=blue chlorite, used for the figures of the Pārśva-devatās and the frames of the portals, from Nīlagiri Hills.

Kāla muguni=black chlorite from Pithausuni, used for the Pūjā image, the Dikpālas and the Rājā images

Regaḍā muguni=rougher chlorite from Nīlagiri Hills, used for the pillars of the mukhaśālā, for the Aruṇa-pillar and pedestal, perhaps also for the pedestal and the supporting prabhā behind the Pūjā image in the main shrine.

Remunā stone=stone of rosy colour, rough grained, containing crystals and sand

Sāhāṇa=sandstone of many varieties :

Bāliā haladiā sāhāṇa=yellow sandstone from Siddhadurgā and Baneśvara Hills

Baulmāḷā=coarse-grained sandstone from Baneśvara.

Chiṭasāhāna=sandstone with spots from Jagadalapura, L. XLII, i

Kuṇḍāpathara—sandstone slabs from Aragaḍa.

Nali sāhāna—reddish sandstone.

Regaḍā kuṇḍa sāhāna=rough sandstone from Aragaḍa

Regaḍā sahānā=rougher sandstone from Tāpaṅga

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IX. MEASURES, WEIGHTS and CURRENCIES

(*1*) *Linear mesurements.*

1 yava like upper phalange of the thumb, 2 aṅgulas
1 gira, $\frac{1}{8}$ of a yava, size of a rice-corn
1 aṅgula—$\frac{1}{2}$ of a yava
1 paba = same as yava = 2 aṅgula = $\frac{1}{12}$ hasta = 8 giras
1 cauka = 4 aṅgula
1 pā or paya = 6 aṅgula or $\frac{1}{4}$ hasta
1 cākhaṇḍa (palm) = 12 aṅgula or $\frac{1}{2}$ hasta
1 muṣṭi or muthuni = 18 aṅgula or cubit measure with closed fist
1 hasta (cubit)=24 aṅgula or 18 inches or 12 yava
1 kāṭhī = I hasta 4 (or 6) aṅgula or $1\frac{1}{4}$ hasta or $22\frac{1}{2}$ inches
1 baḍa kāṭhī = $1\frac{3}{4}$ hasta (larger than normal kāthi of $1\frac{1}{4}$ hasta, especially used in field measuring (mapagunāgāra)
hasta-kāṭhī = unit of mesurement established individually for every construction according to the cubit length of the Sūtradhara or the Yajamāna, the patron of the building

(*2*) *Administrative land divisions*

I maṇḍala = 1-10 villages
I biśa = 2-3 maṇḍalas
I khaṇḍa = 10 biśa

(*3*) *Land measurements*

Pādikā = measuring rod or chain of varying length, the one in common use being of 6 hasta 22 aṅgula length.
I biśvā = I padikā square (10′5″ square or 12 $\frac{1}{10}$ square yards)
I guṇṭha = 16 biśvā
I māṇa = 25 guṇṭha or 20 padikā square (about 1 acre or 4840 sq. yards)
I bāṭi = 20 māṇa

(*4*) *Time Divisions*

I day (from 6 A. M. to 6 A. M.) = 8 prahara
I prahara = 3 hours = 3 $\frac{3}{4}$ ghaḍi
I ghaḍi = 2 daṇḍas = 48 minutes
I daṇḍa = 24 minutes

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(5) Gold and silver coins, currencies

1 Sūrya māḍha = gold coin of $\frac{1}{4}$ tolā in use under the Gaṅga Kings, including Nārasiṁha I
1 Padma māḍha = gold coin of $\frac{1}{5}$ tolā brought into use during temple construction
1 Gaṅga māḍha = gold coin of $\frac{1}{2}$ tolā (used in kurujātaka mālā = garland of gold coins)
1 Elephant marked māḍha, weight unknown
1 sāna māḍha = smaller māḍha
1 sunia cāki = gold disc
1 Kulatuṅga māḍha = coins of Kulatuṅga kings in the South
1 aśrapi = oblong piece of gold of $\frac{1}{2}$ tolā with punch mark
1 jita sunā aśrapi = gold disc without imprint of 1 rati less than 1 tolā
1 Bādshāh kaḷa taṅkā = minted Muslim silver coin of 1 tolā
1 sikkā = Bādshāh silver coin of $\frac{1}{4}$ tolā
Baṅkālekhā = cursive Persian script on Muslim coins

(6) Gold and Silver weights

1 tolā = 1 bhari
1 bhari = 10 maṣā
1 maṣā = 10 rati or 10 kāiñca (abrus pracatomus = having pods half red half black)
1 rati = 4 dhāna or 4 ciñā (millet grain)

(7) Kauḍis, (kauri)

1 kaḍā = 1 piece
1 gaṇḍā = 4 kaḍā
1 paṇa = 20 gaṇḍā = 80 pieces
1 kāhāṇa = 16 paṇa = 1280 pieces

(8) Coconuts

1 gaṇḍā = 4 pieces
1 paṇa = 20 gaṇḍā or 80 pieces
1 chelā = 25 gaṇḍā = 100 pieces
1 kāhāṇa = 16 paṇa = 1280 pieces

(9) Stones

1 koḍi = 1 pile of 20 stone slabs

(10) Iron and lead weights

1 paḷa = 12 biśās or 15 seers

(11) Books

1 gādi = 1 pile of books

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(*12*) *Vegetables*

1 bhāra = about 25 seers or the weight one man can carry on his shoulders in two baskets suspended from the ends of a bamboo pole

(*13*) *Rice measures*

1 māṇa = $\frac{1}{2}$ seer
1 kuñcā = $1\frac{1}{2}$ seer
1 gauṇi = $3\frac{1}{2}$ or $3\frac{1}{4}$ seer (acc. to locality)
1 pauṭi = 20 gauṇi
1 bharaṇa = 80 gauṇi or 4 pauṭi or 280 seers

(*14*) *Oil and ghee measures*

1 paḷa = 4 tolā or $\frac{1}{20}$ seer
1 kuñcā = 25 pala or $1\frac{1}{4}$ seer
1 māṇikā = 4 kuñcā or 5 seers

(*15*) *Oil and ghee weights*

1 biśā = 25 pala or $1\frac{1}{4}$ seer
1 paśuri = 5 seers

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LIST OF PLATES

The Plates with the illustrations are given, as far as possible, in the order in which the various parts of the buildings are described in the Palmleaf Manuscript No. I, dealing with the *Architecture of the Padmakeśara temple of Koṇārka.* with indication of the leaves to which they refer. This Manuscript consists of 23 leaves inscribed on both sides. One side of the leaves has been designated with the letter A and the reverse side with the letter B.

The original drawings on the palmleaf Ms. are given enlarged by the side of the actual architectural parts and sculptures.

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(c) giving the functions of six Officers :
Baya bhandāra adhikārī (Superintendent of accounts), Baṇika Nāyaka (Supplies Officer), Bhaṇḍāra Nāyaka (Supervisor of stores), Jalarṇa Nāyaka (Supervisor of camp-messes) Koṣthakaraṇa (internal Manager), Angai Nāyaka personal Representative of the Rājā (Calcutta Museum). Arch. Survey

Pl. 53. KELI-BANDHAS ON MUKHAŚĀLĀ ANURATHAS
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(d) Rājā conferring with sthapatis. Arch. Survey

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Pl. 59. Doorjamb of Eastern Portal (Leaf 16 B, b). R. Burnier

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		Photos
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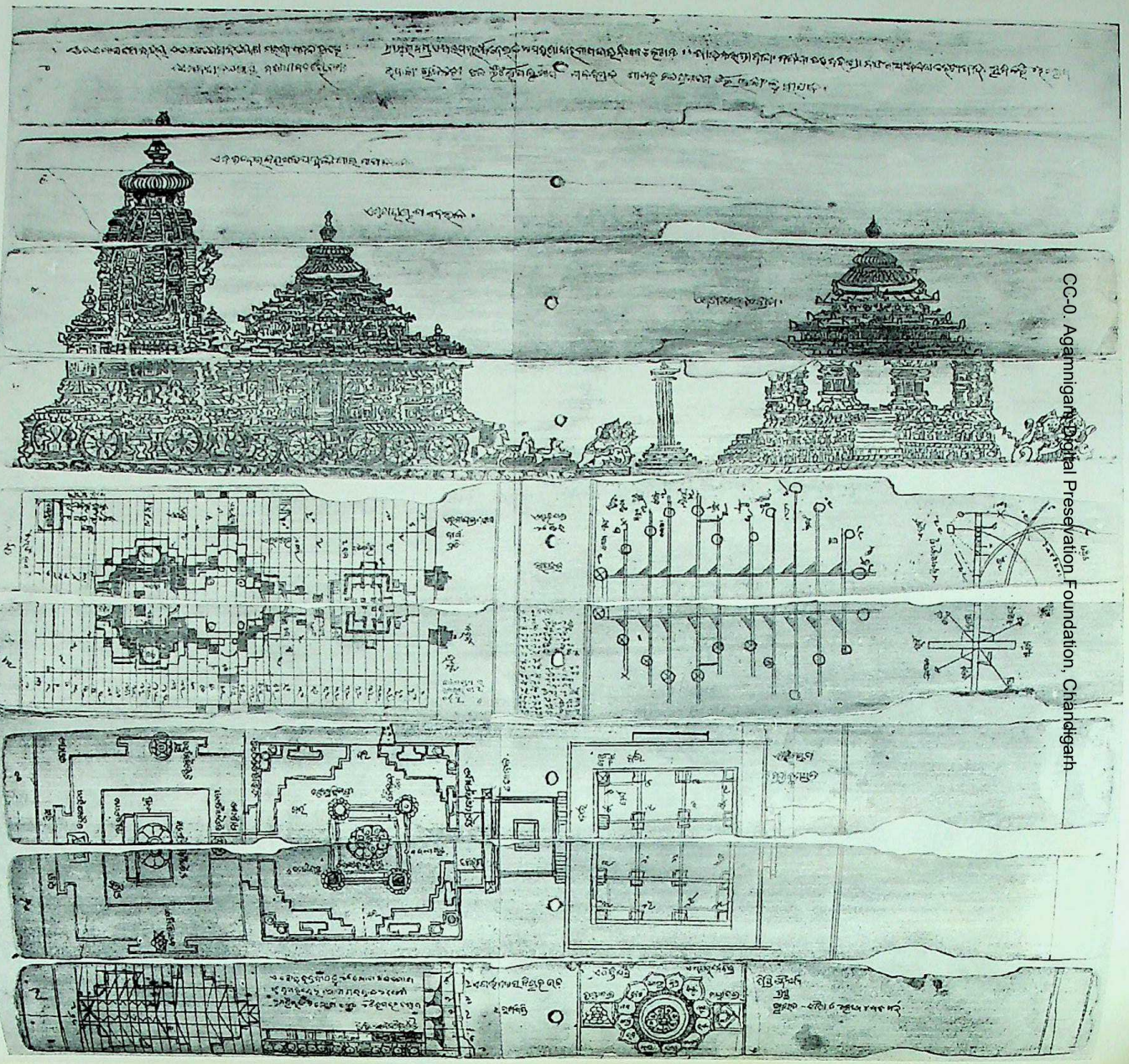

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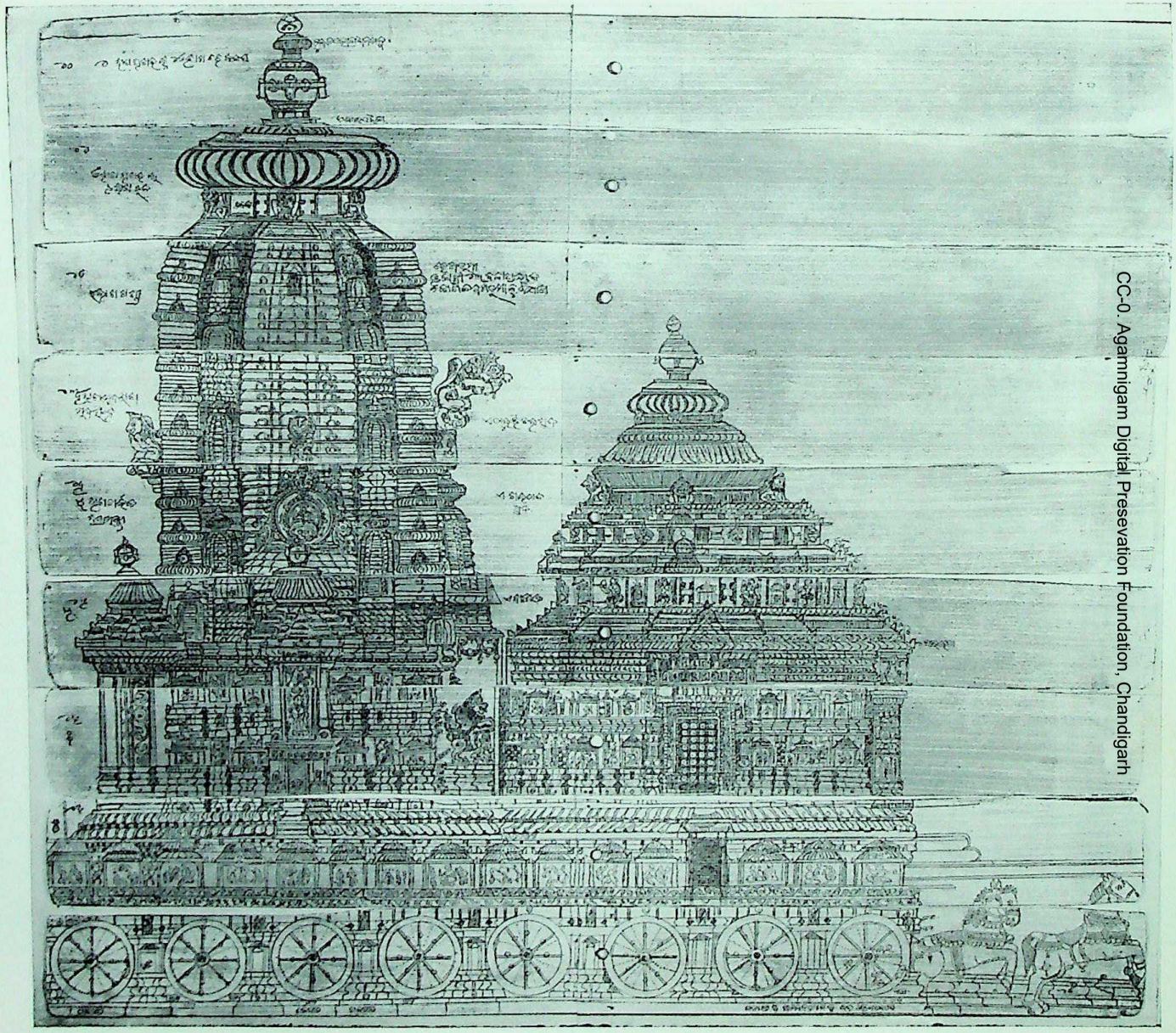

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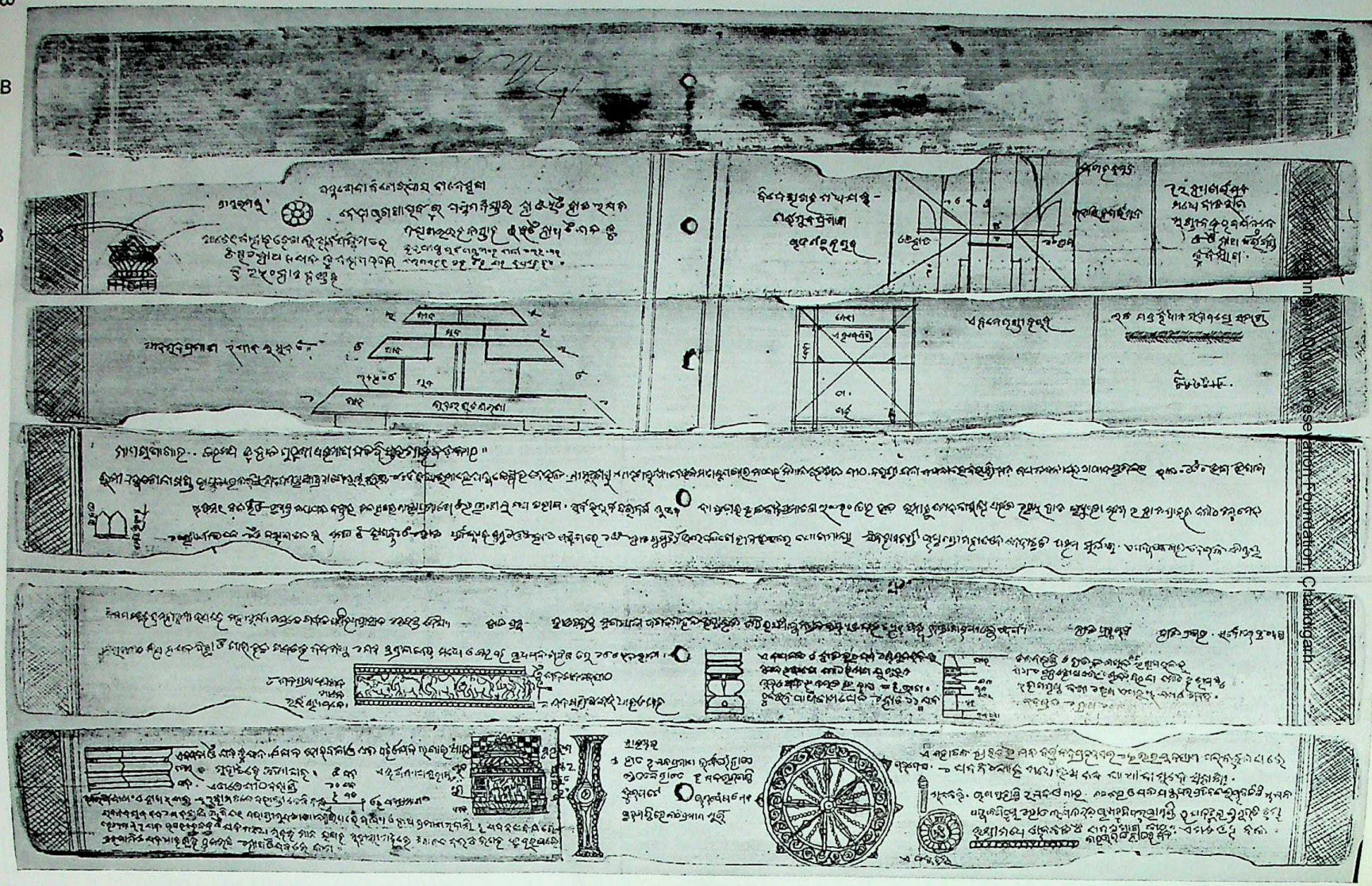

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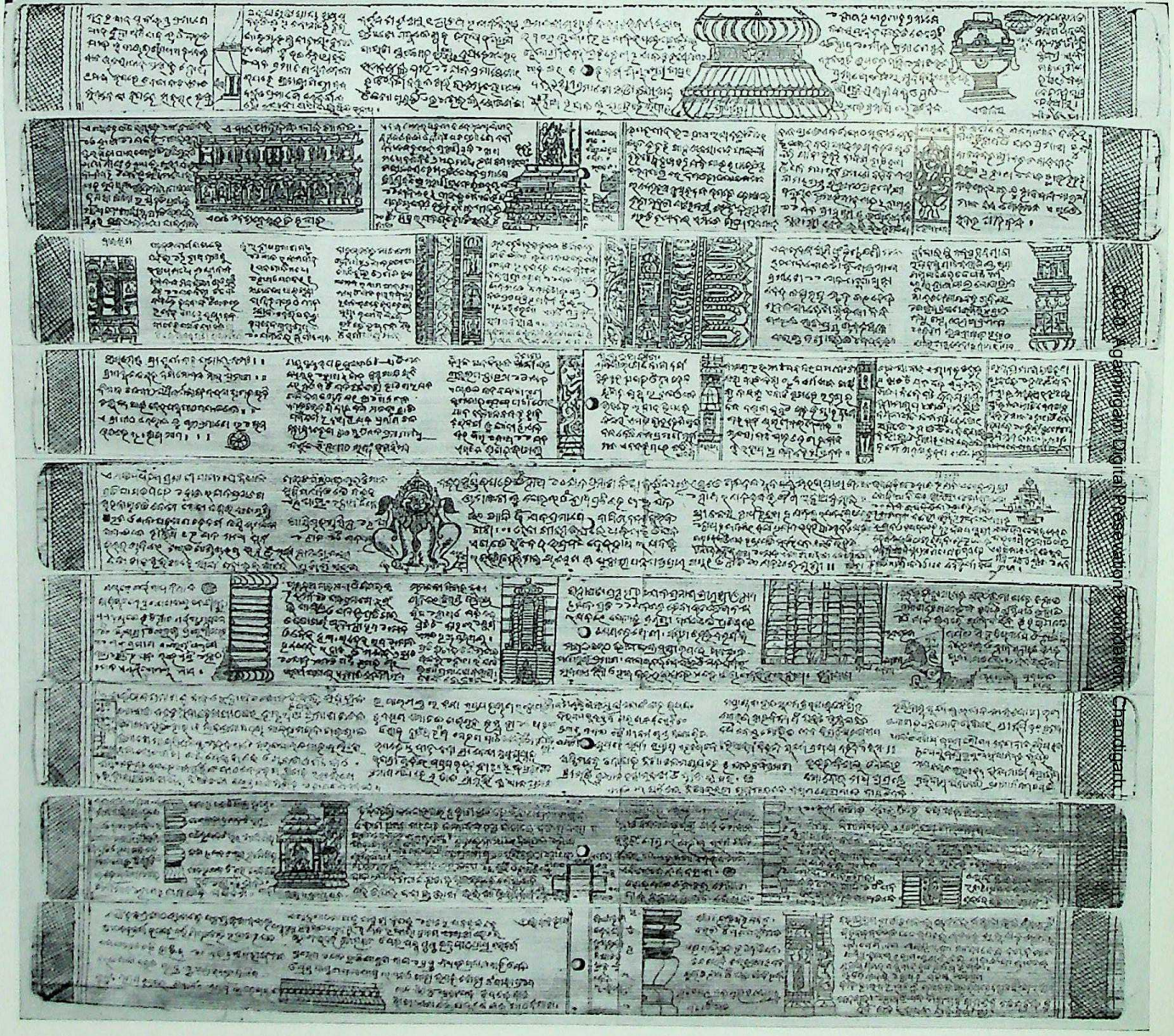

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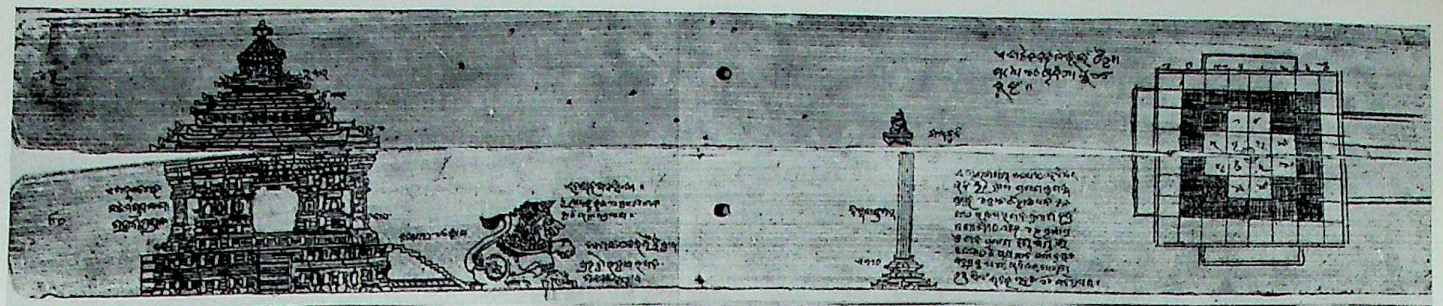

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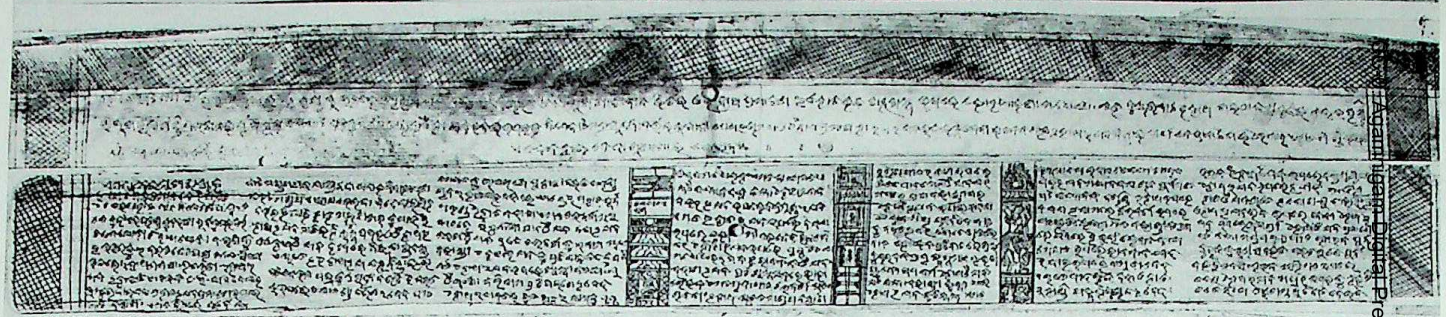

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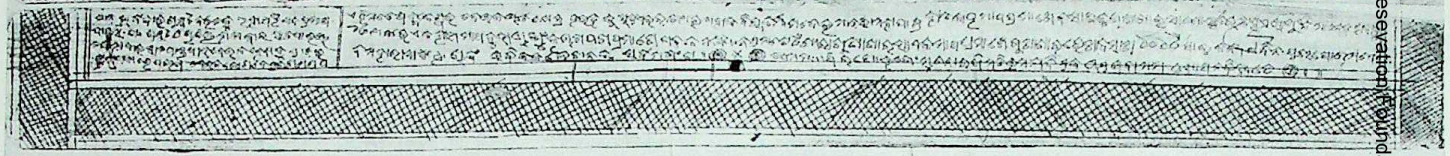

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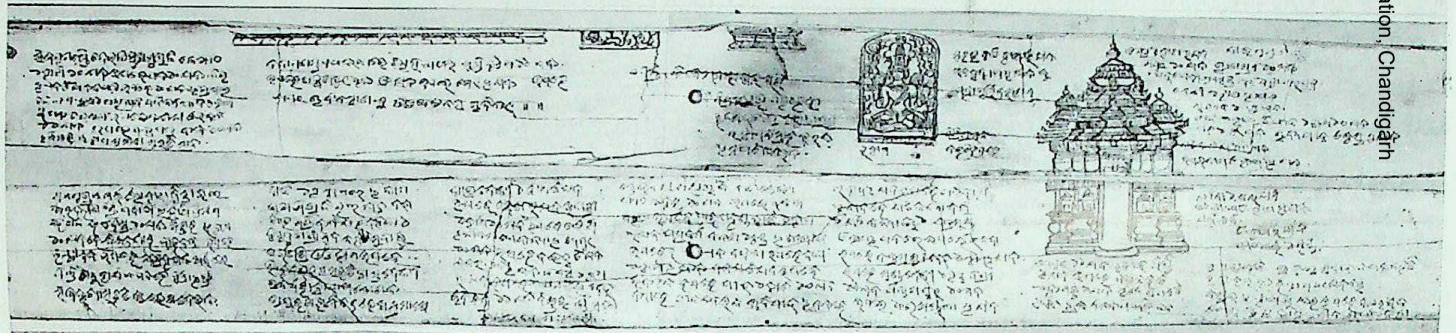

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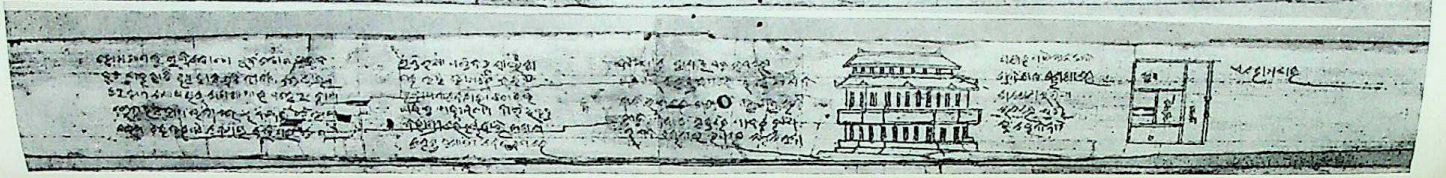

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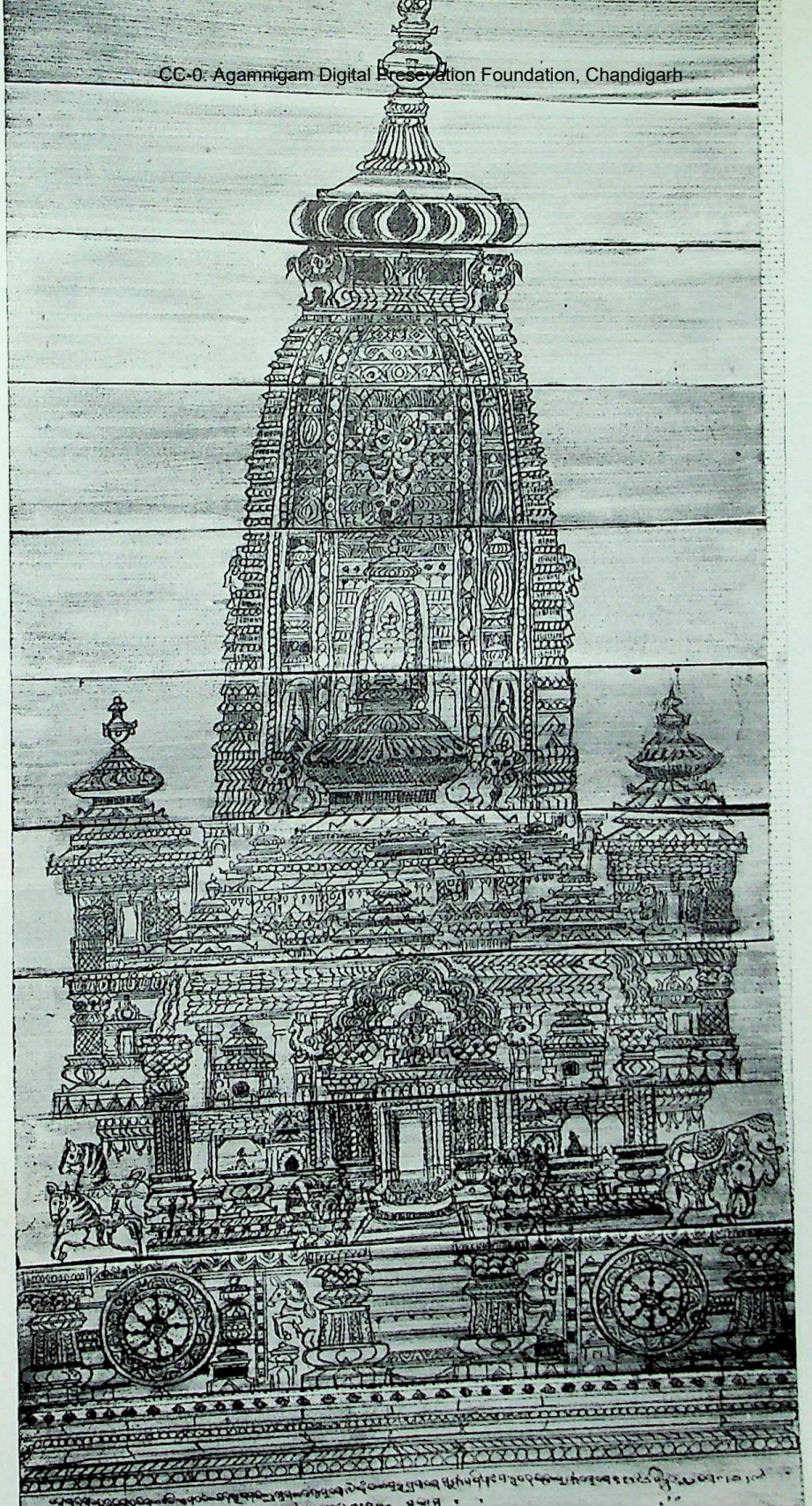

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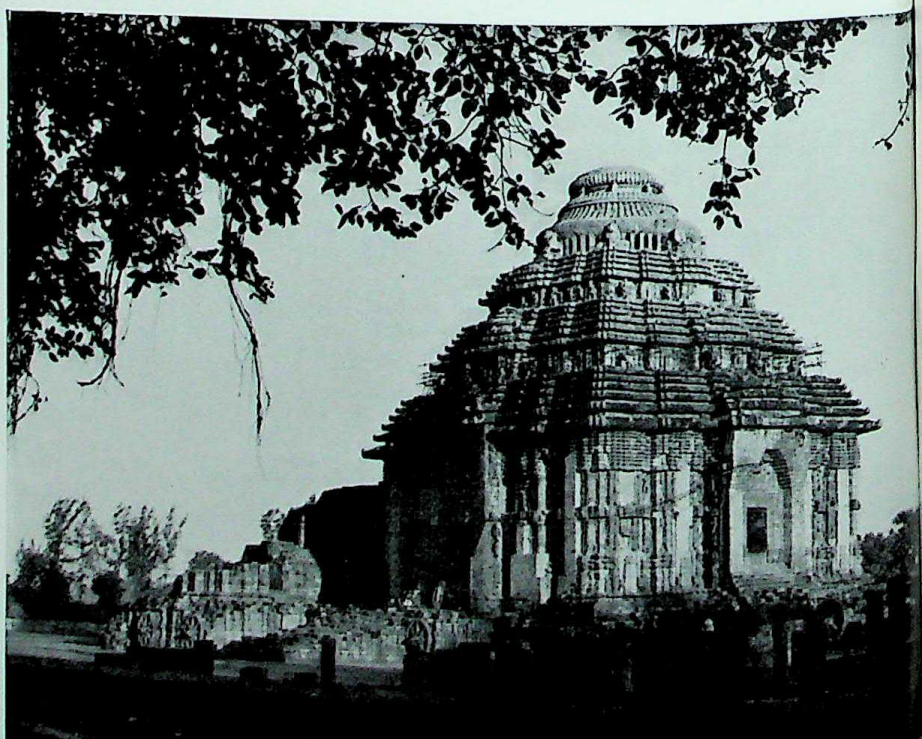

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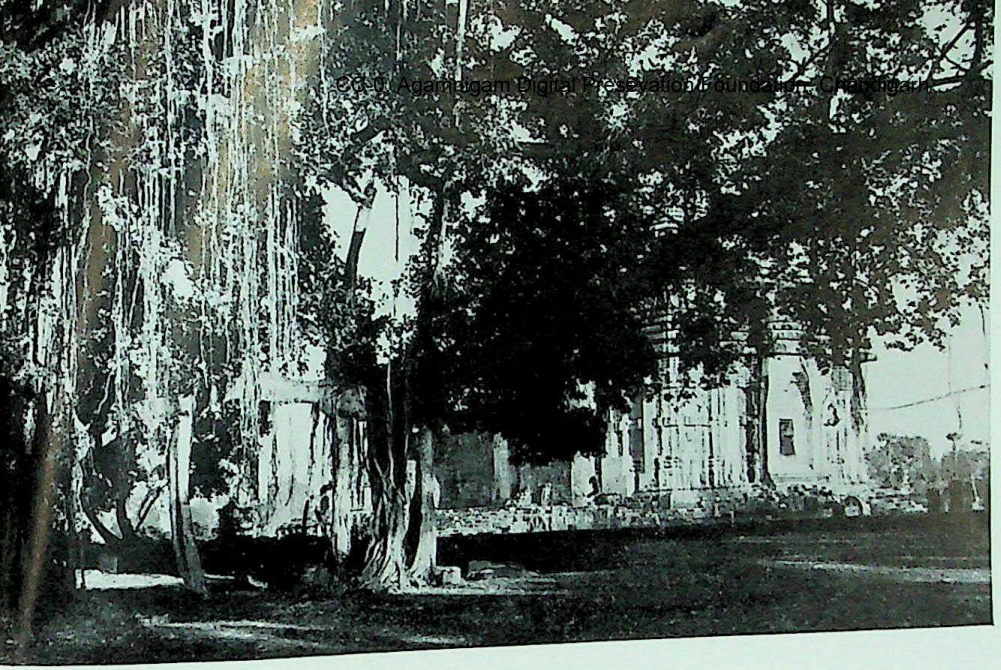

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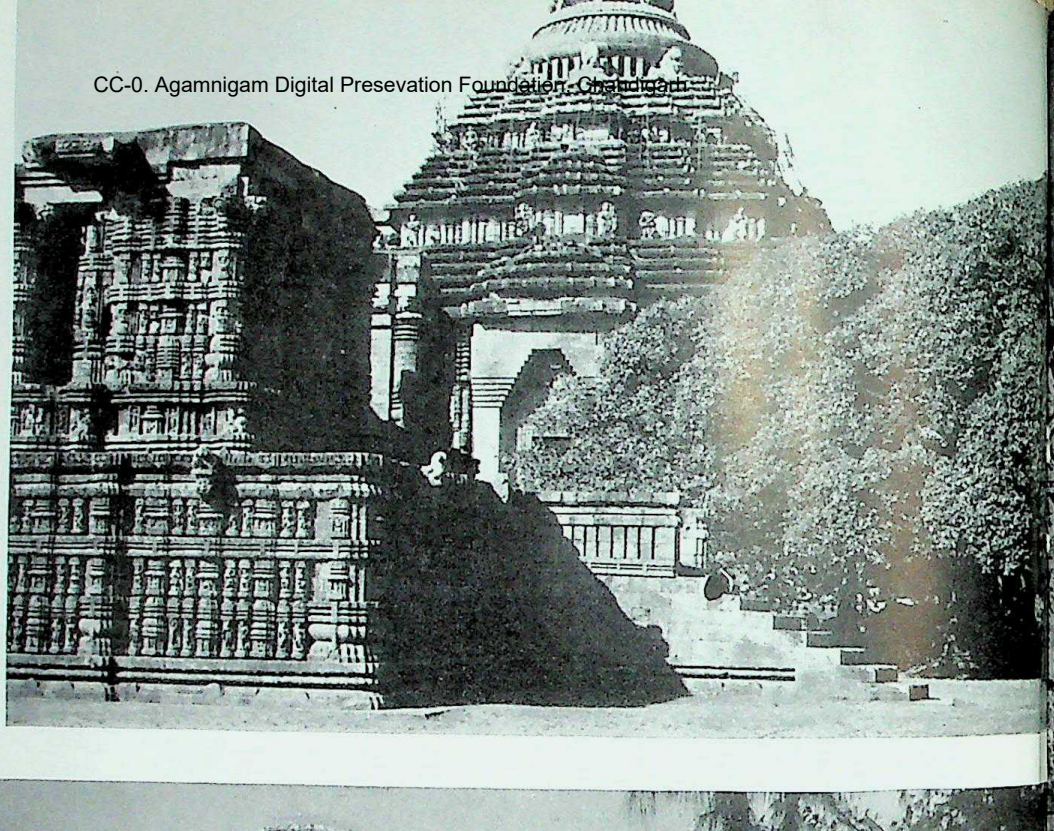

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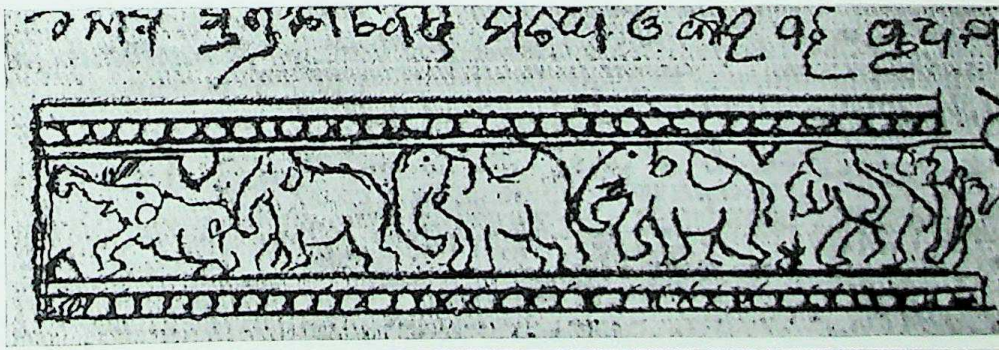

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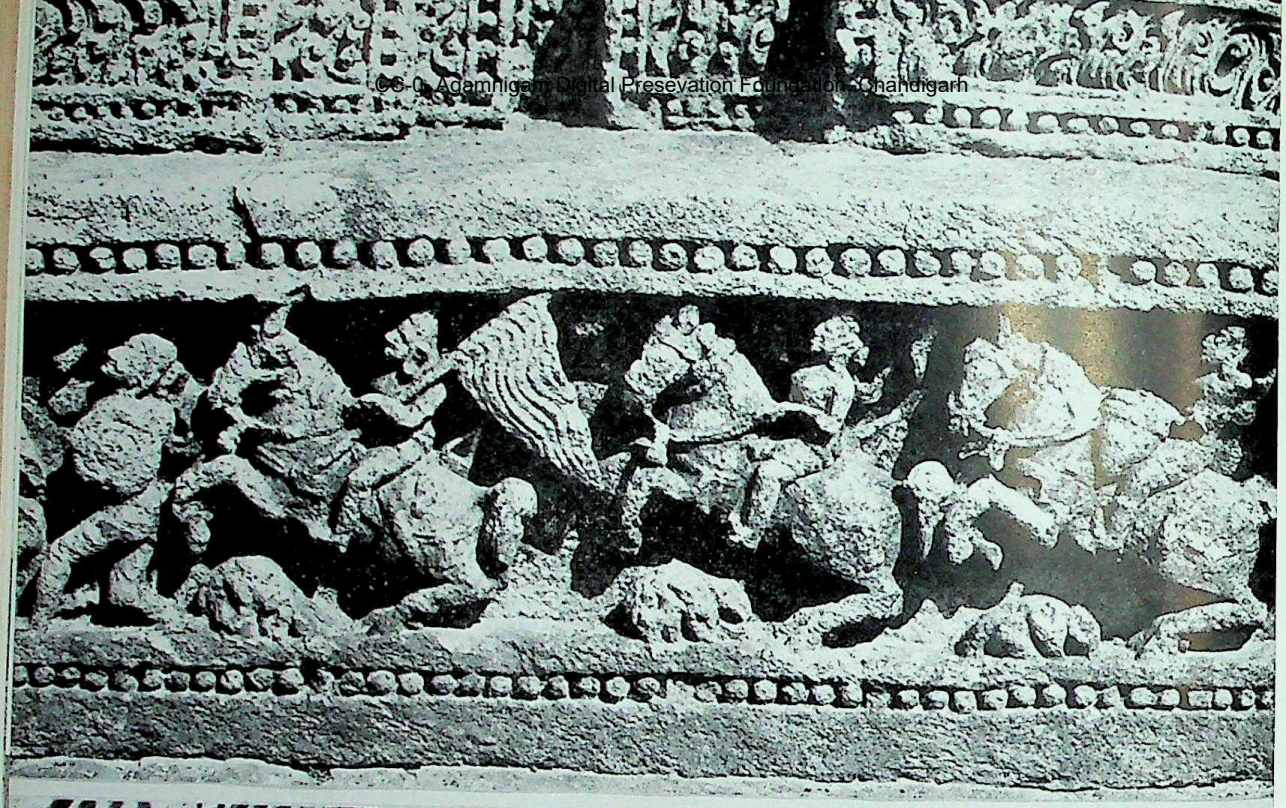

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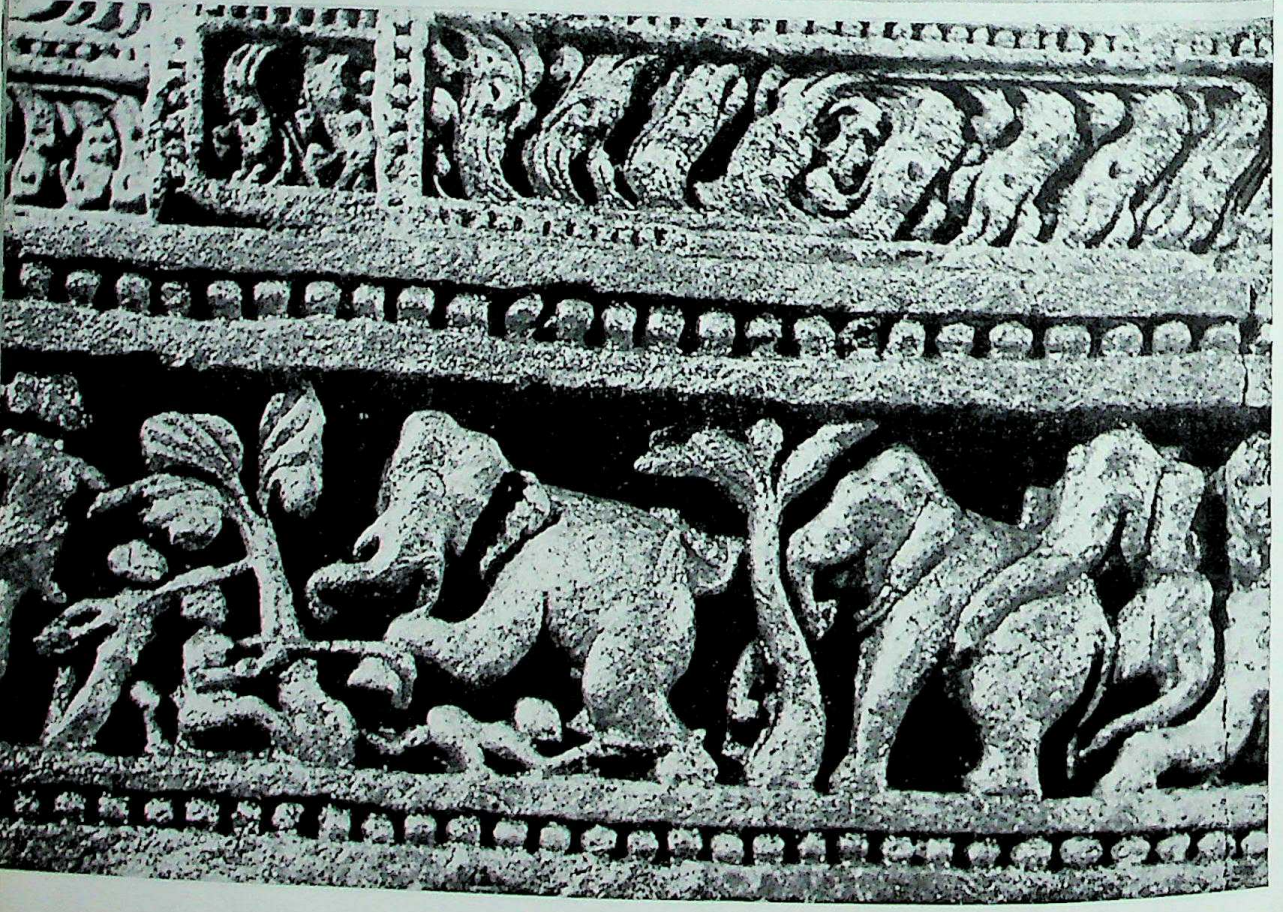

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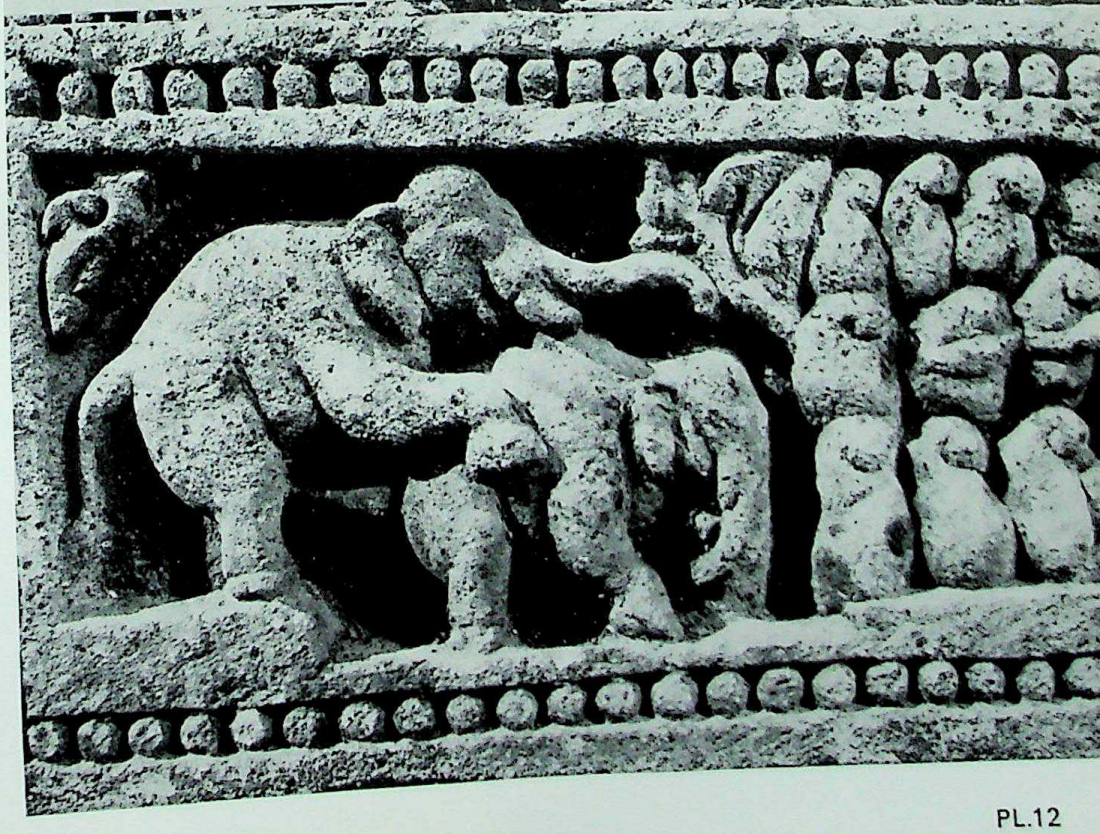

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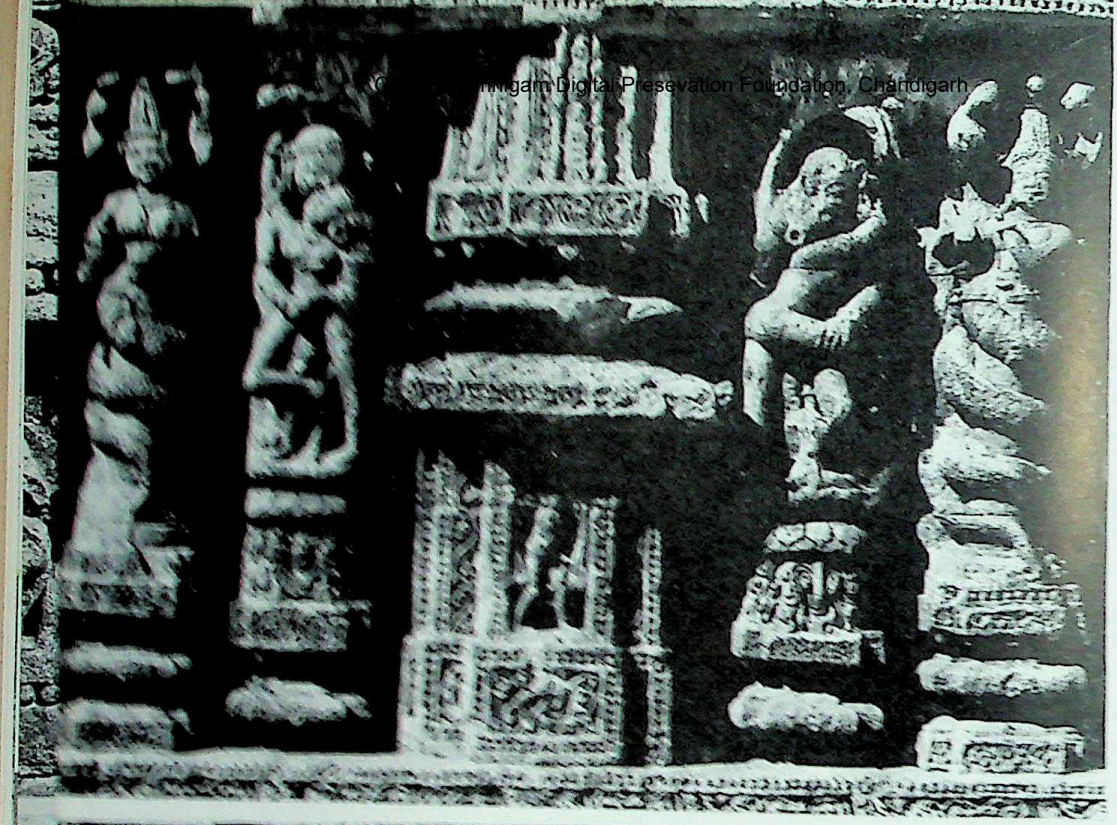

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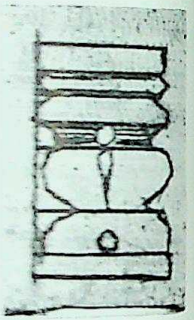

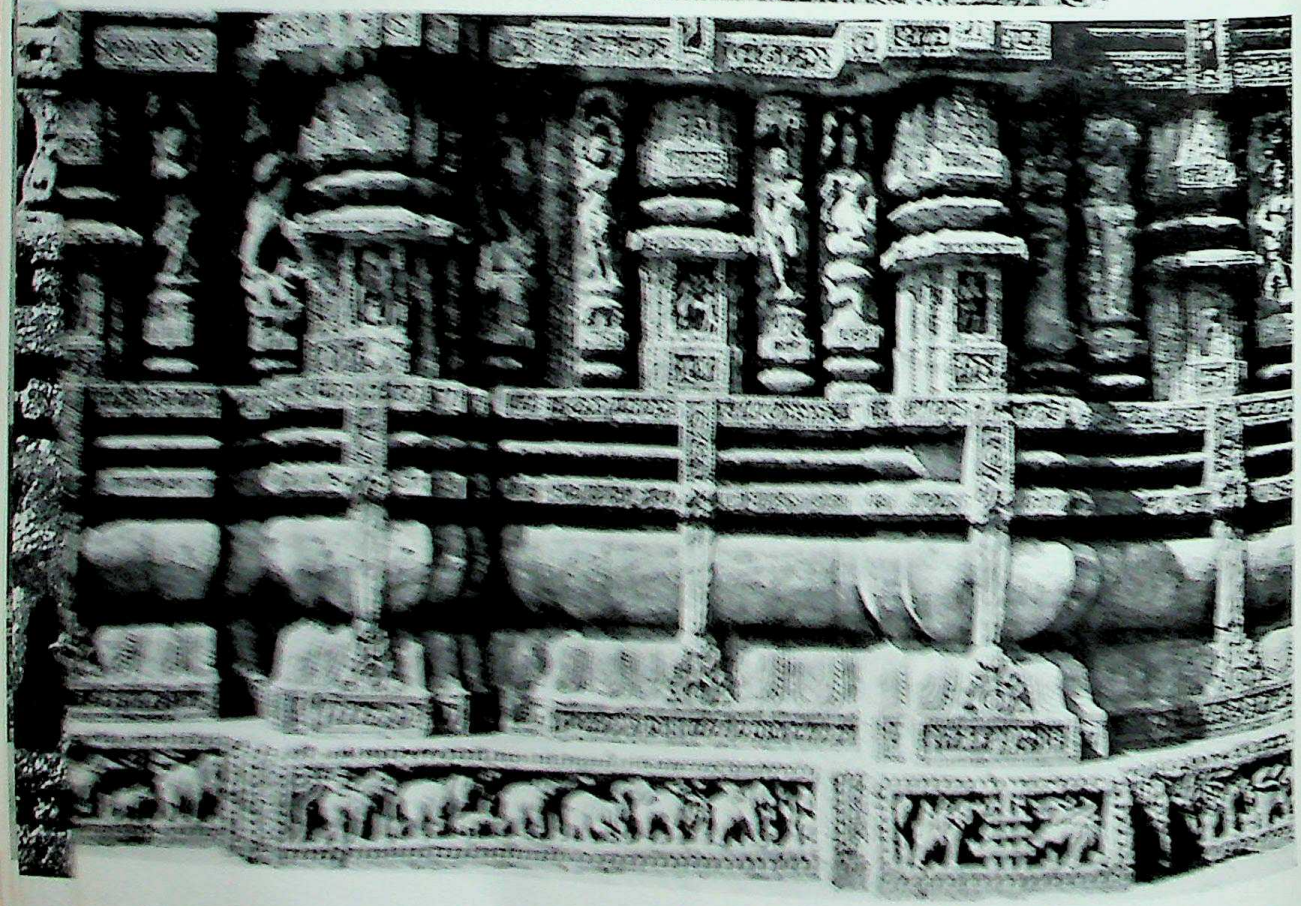

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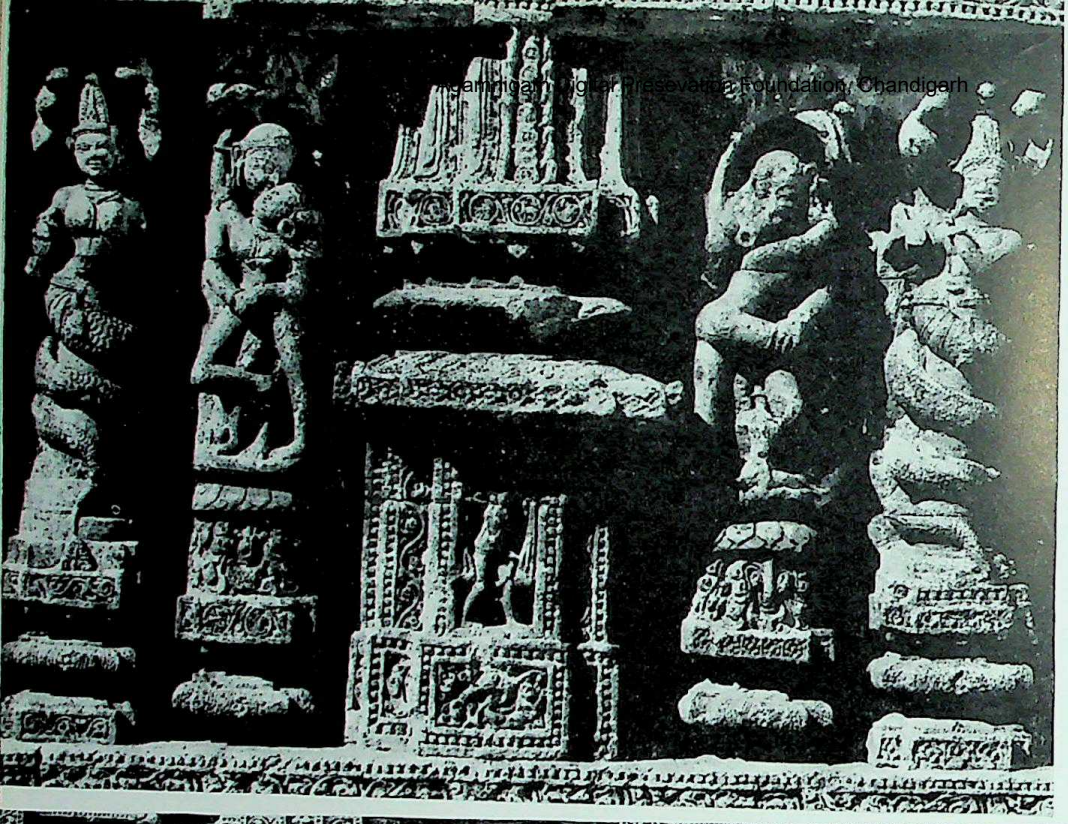

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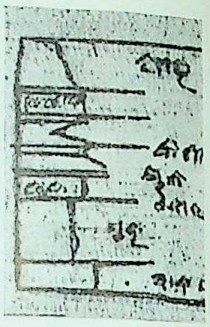

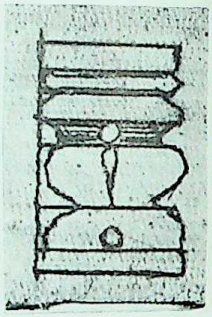

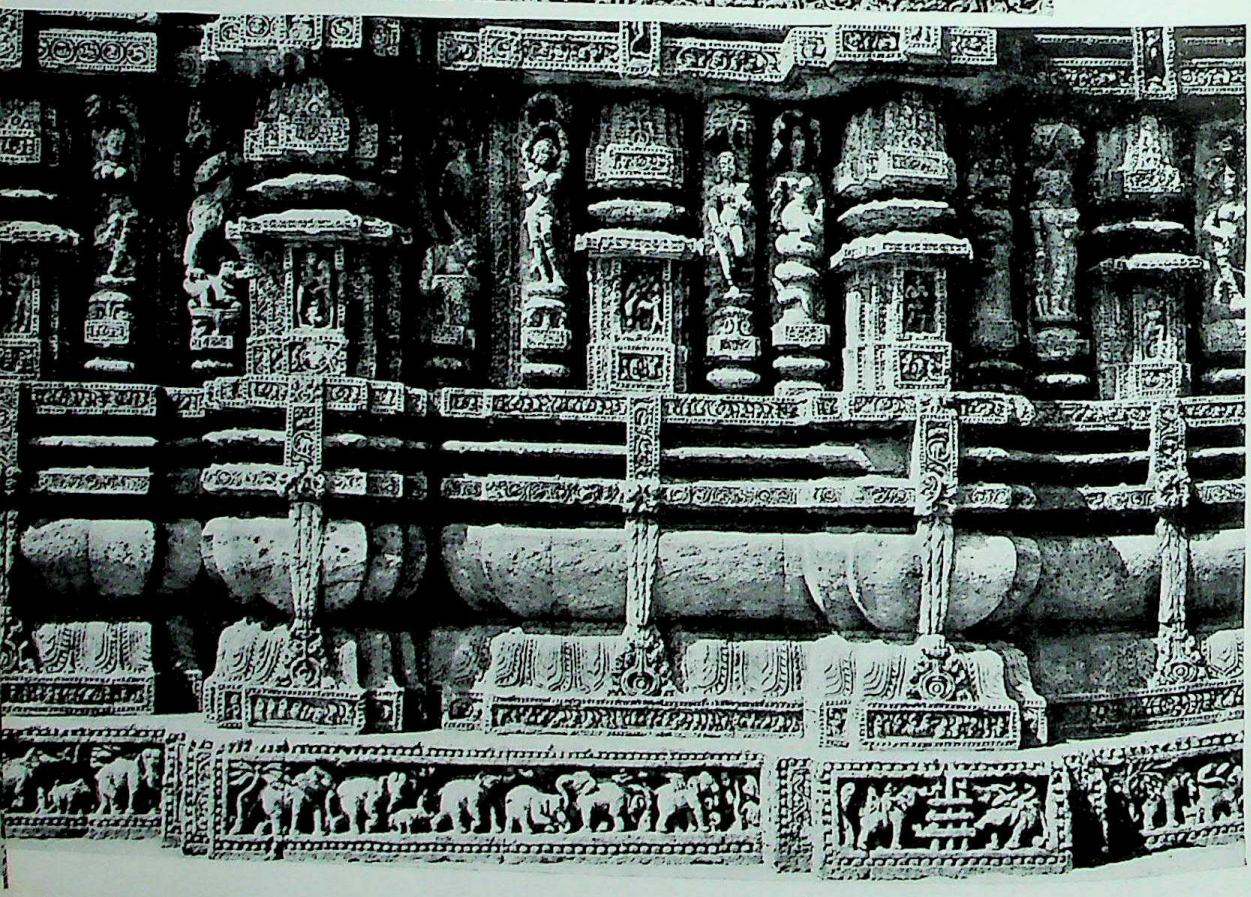

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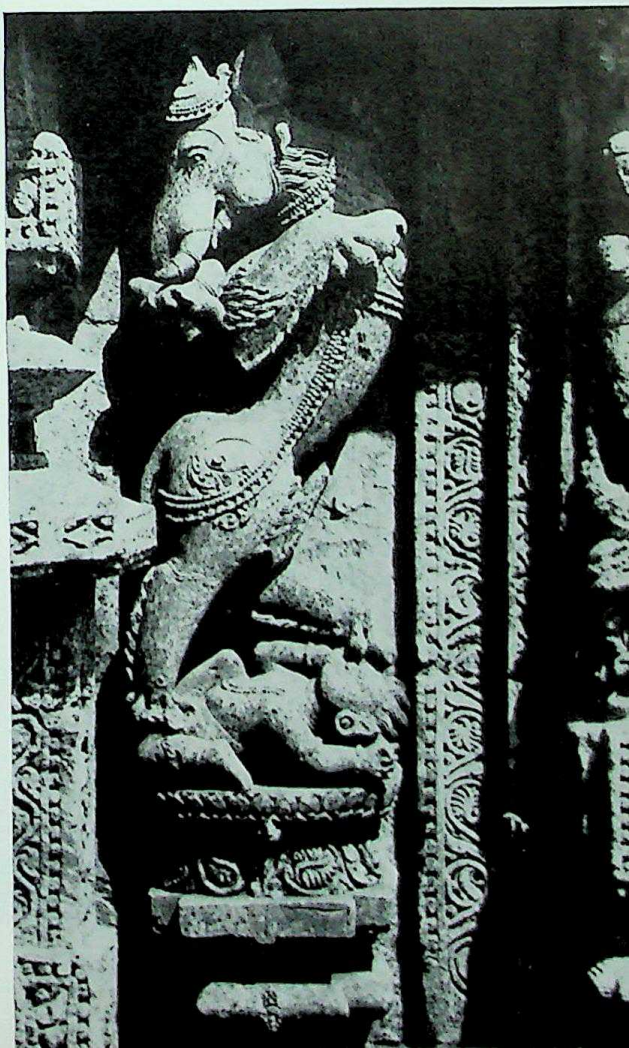

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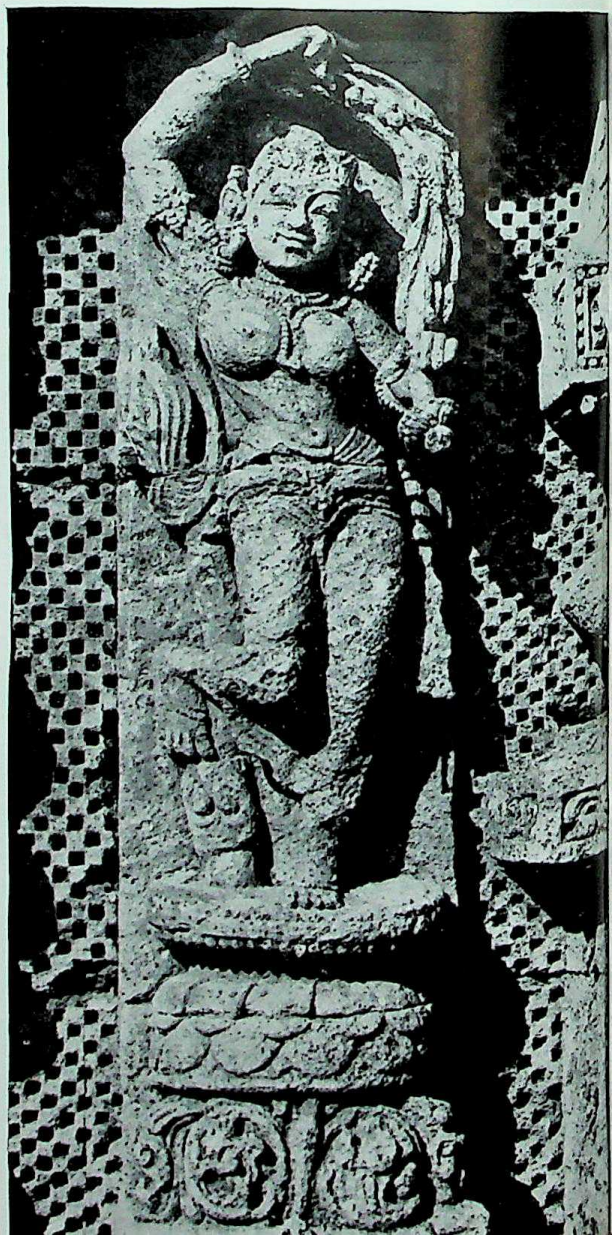

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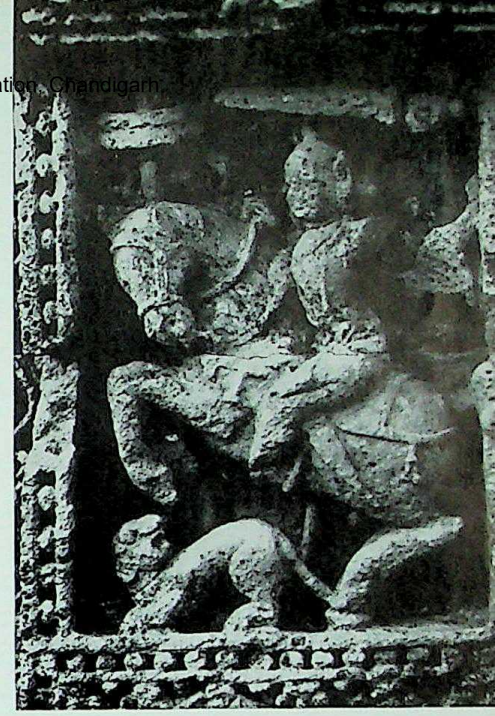

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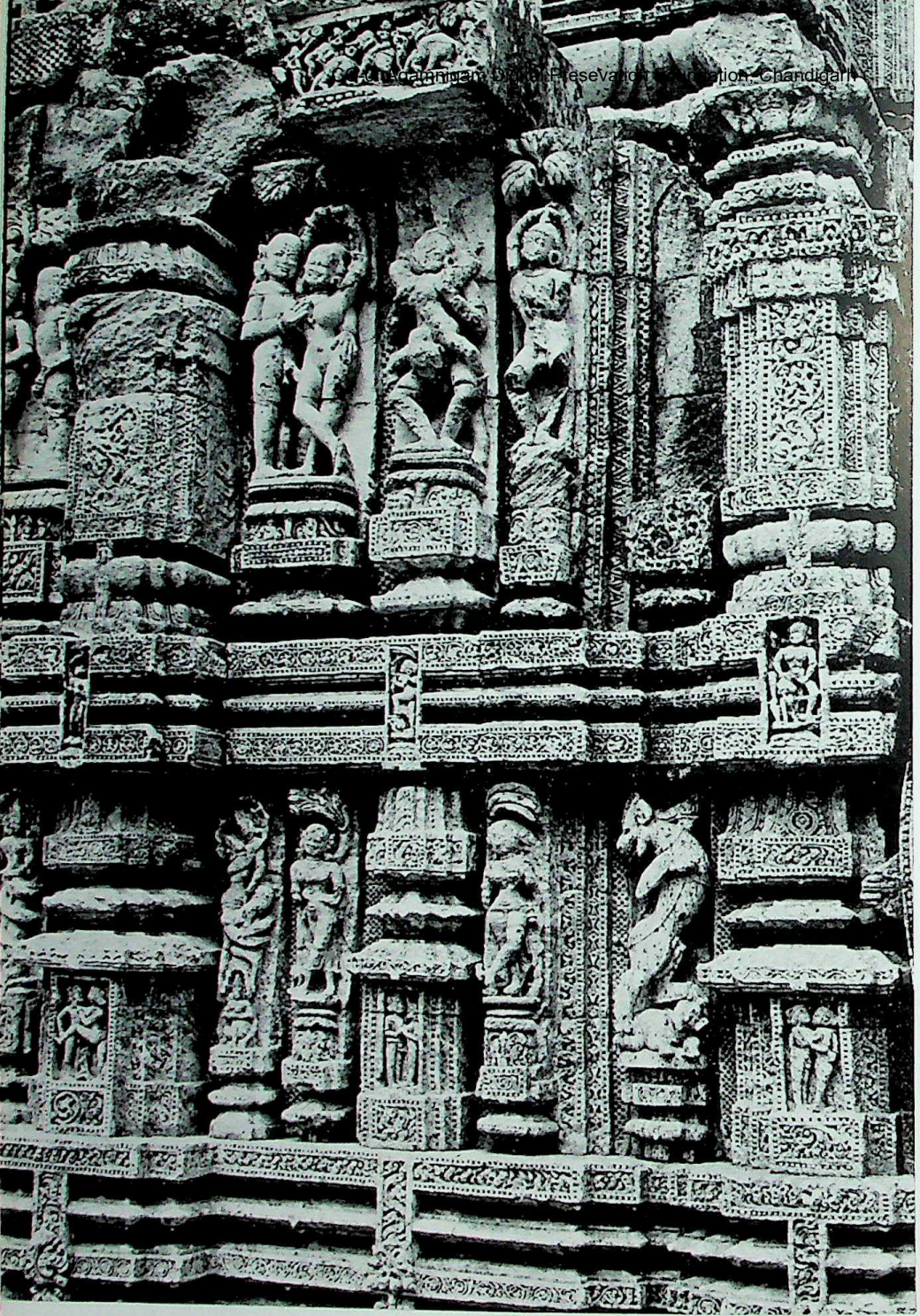

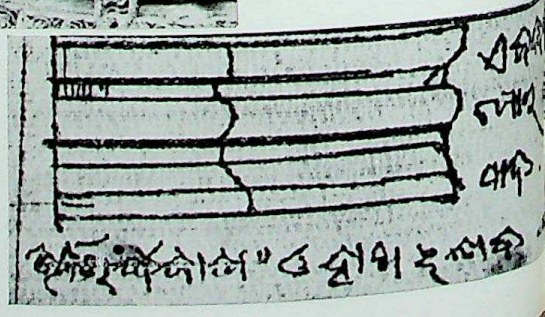

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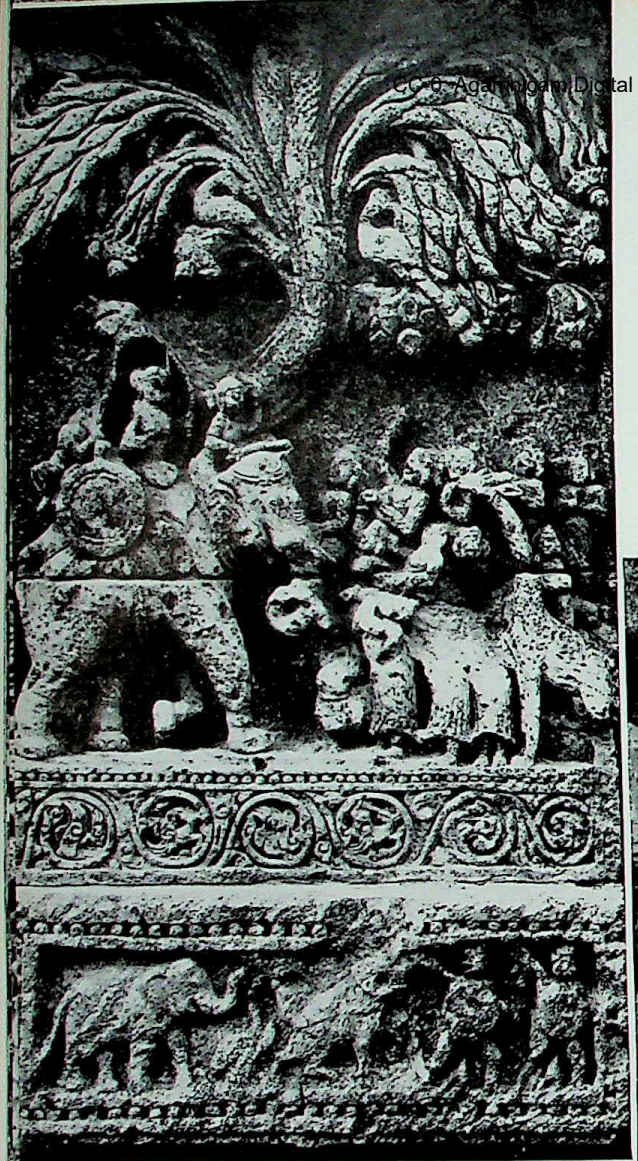

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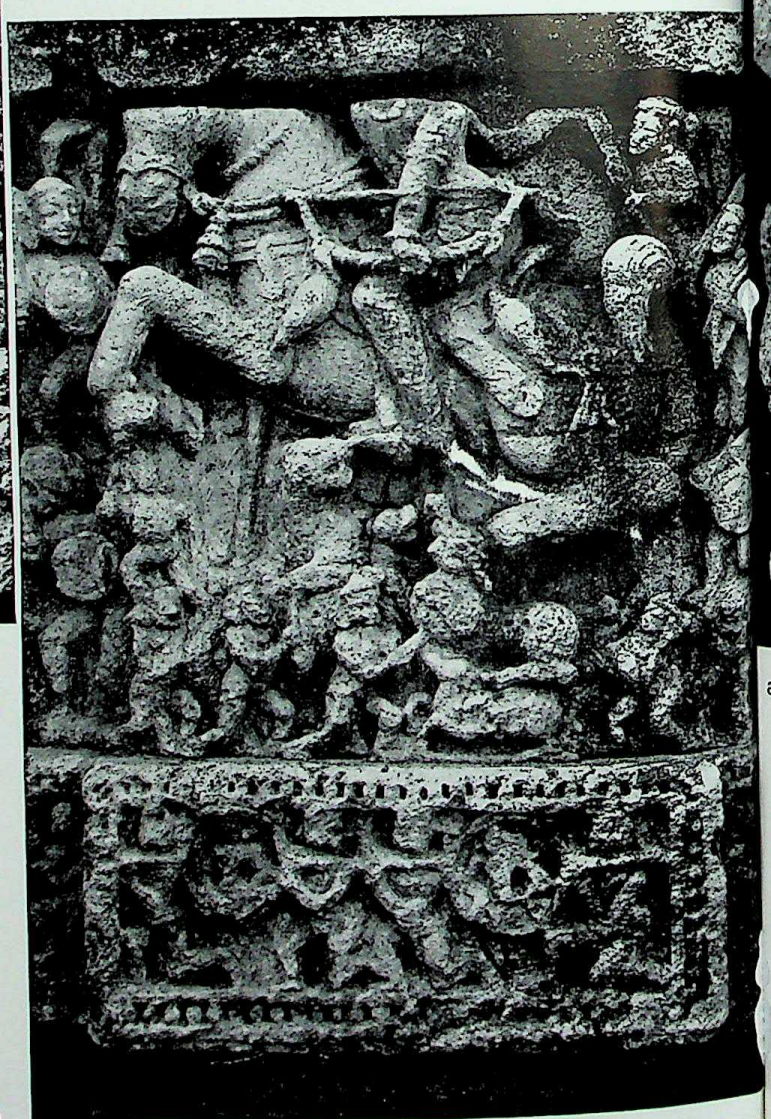

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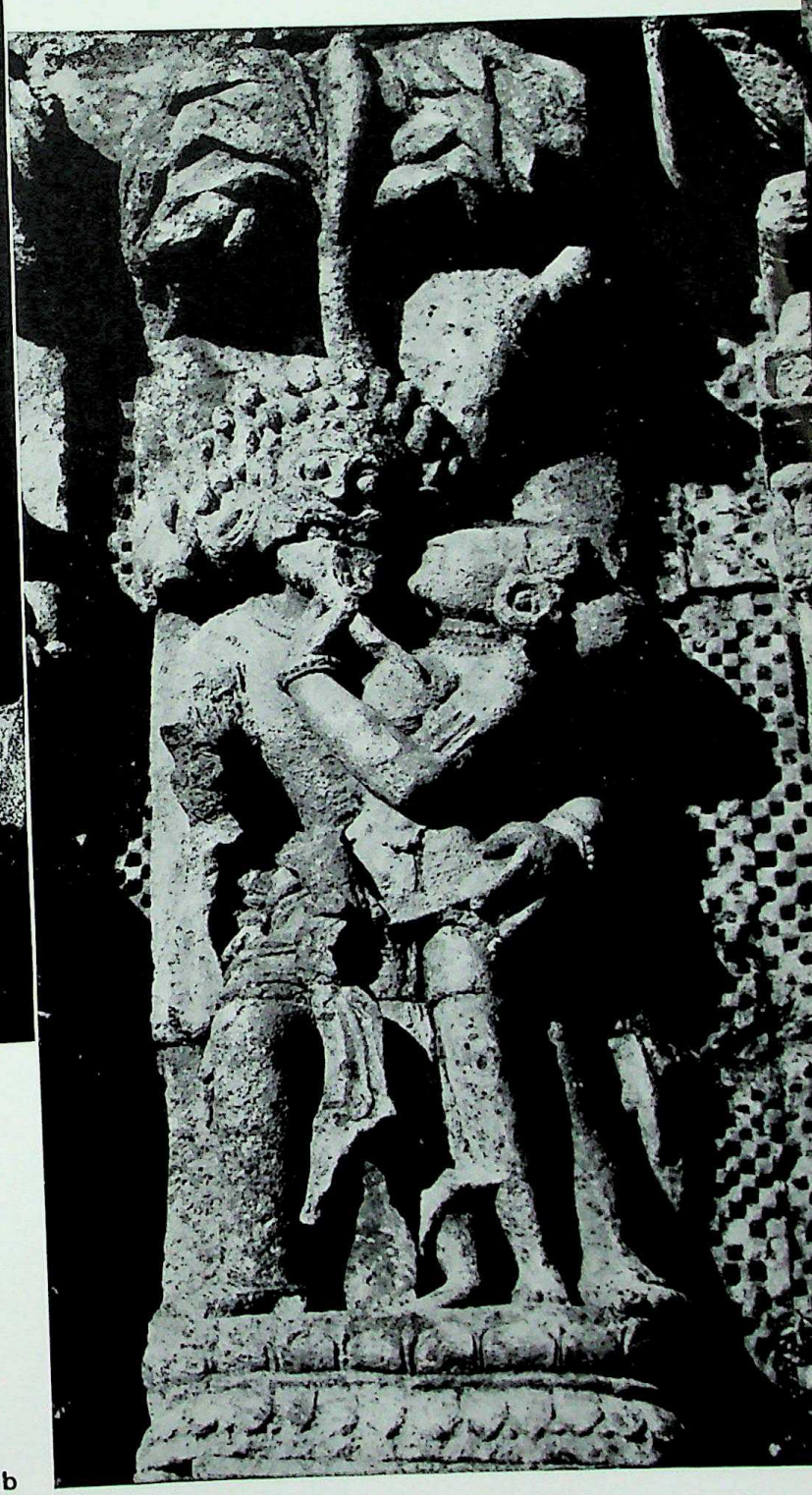

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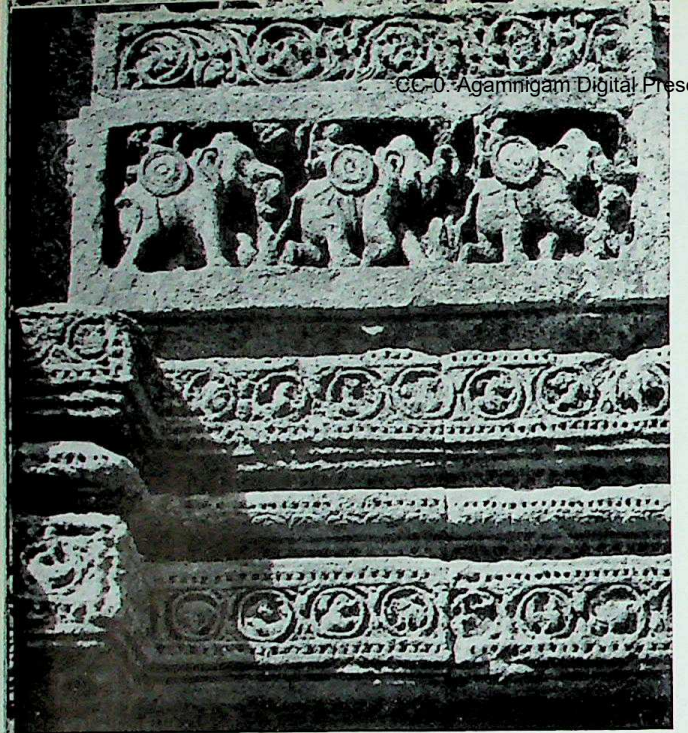

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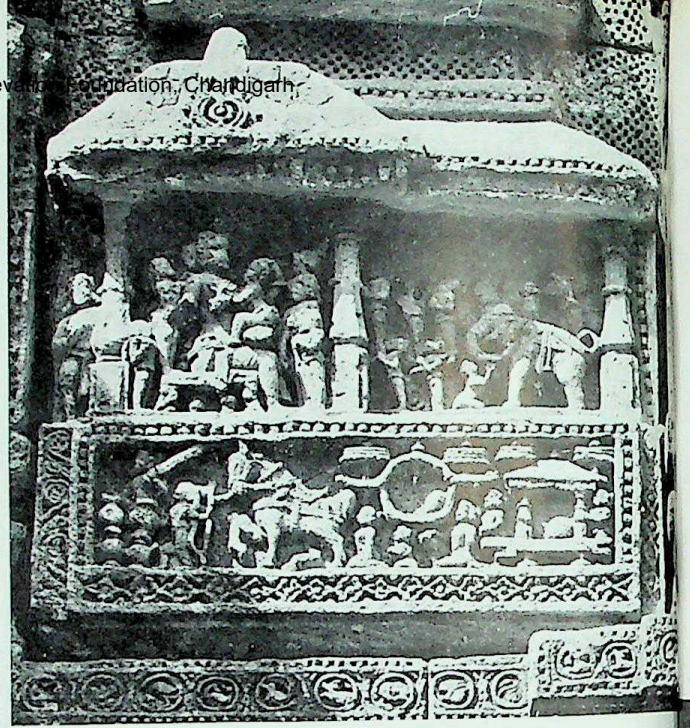

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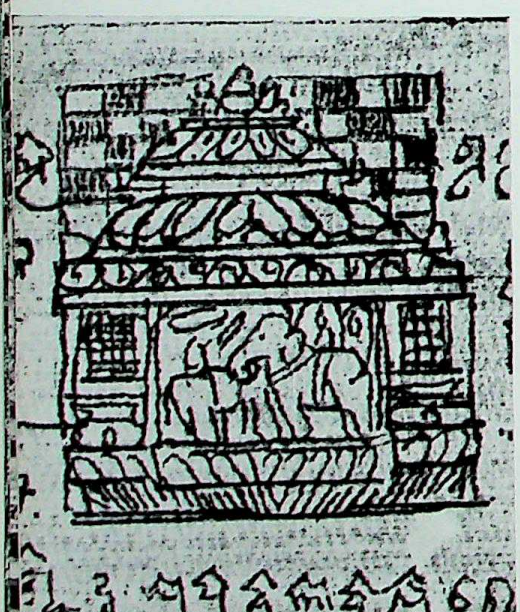

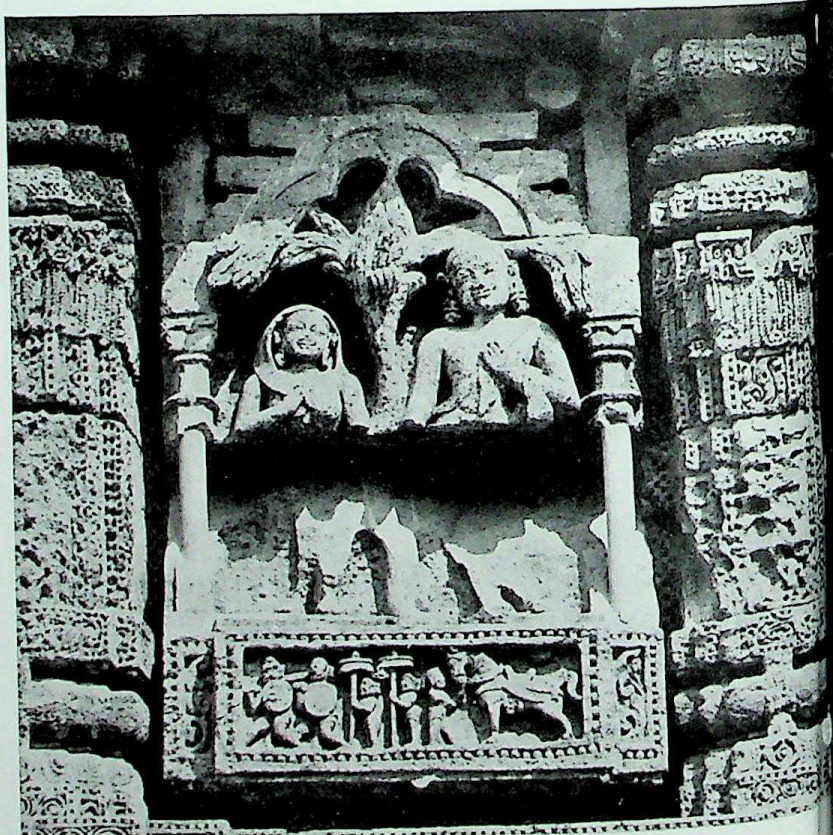

c

CC-0. Agamnoam Digital Preservation Foundation, Chandigarh

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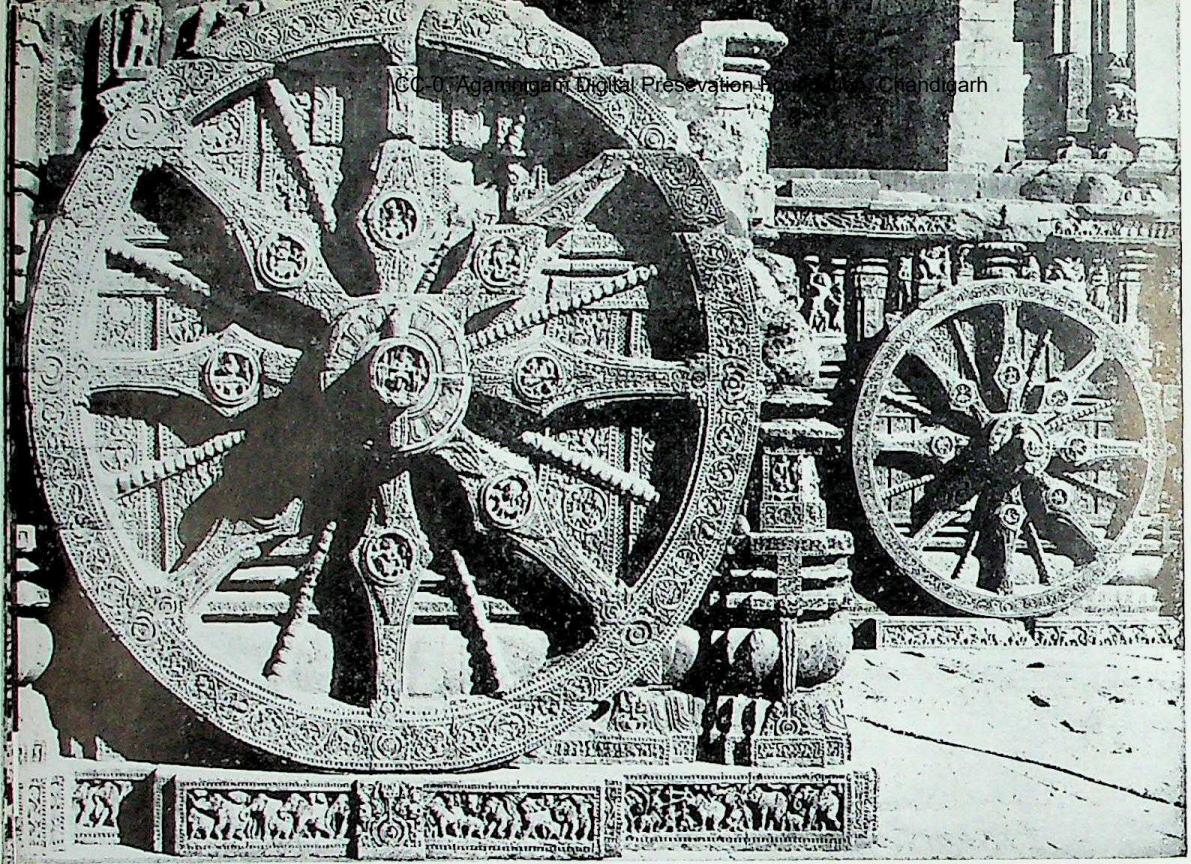
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh



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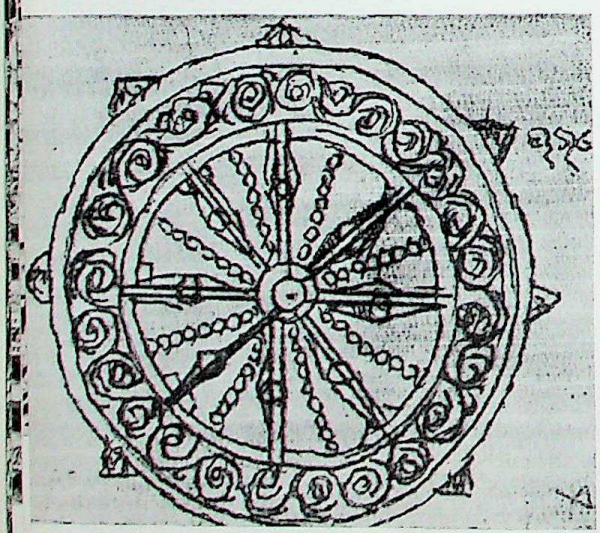

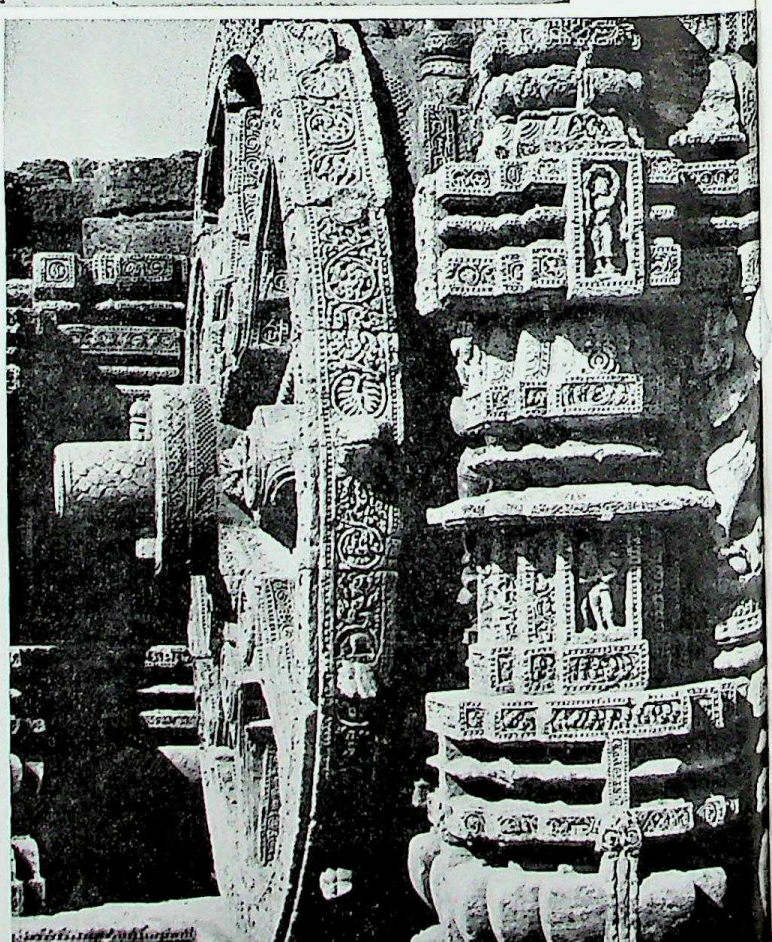

PL.23

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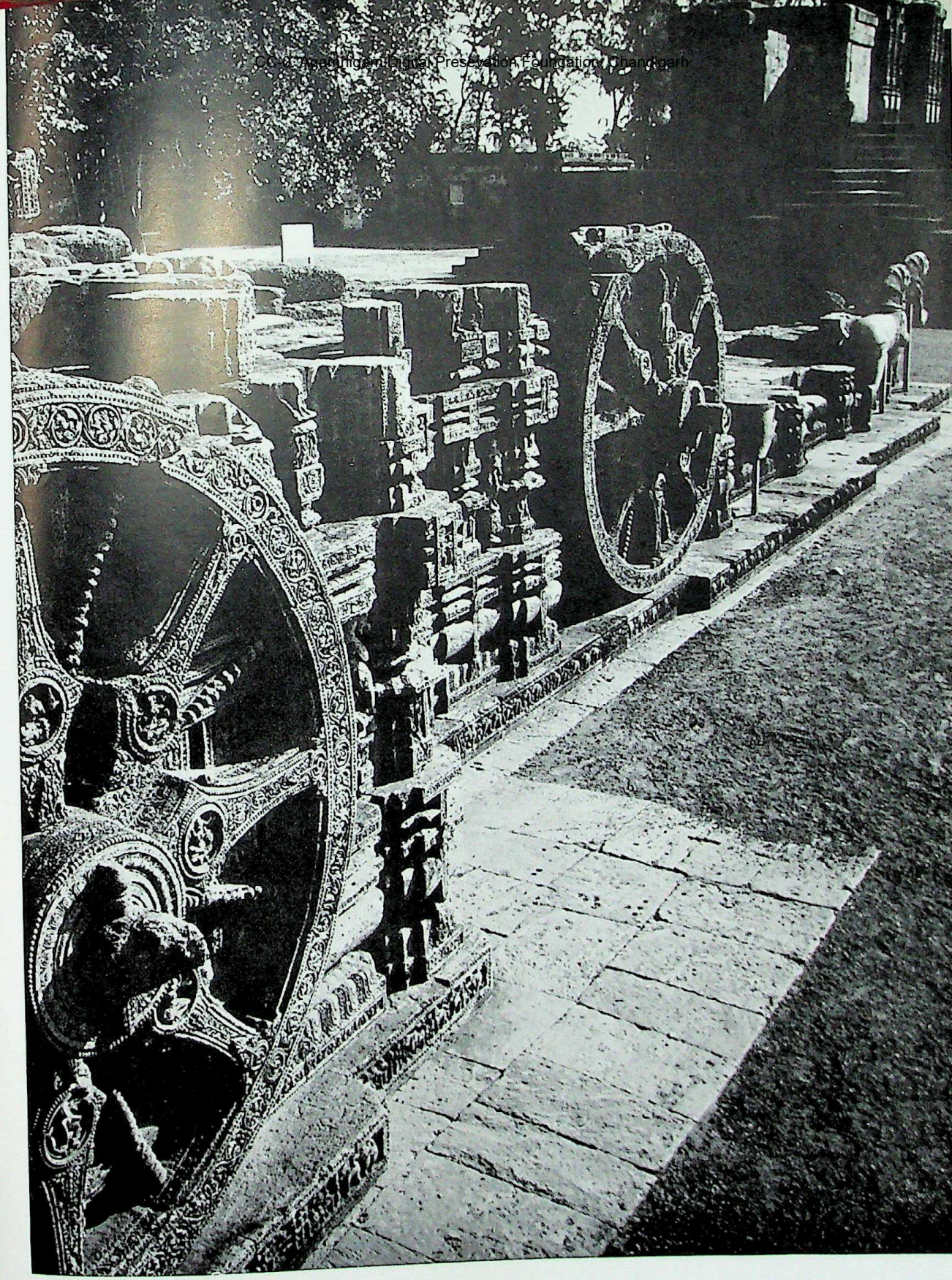

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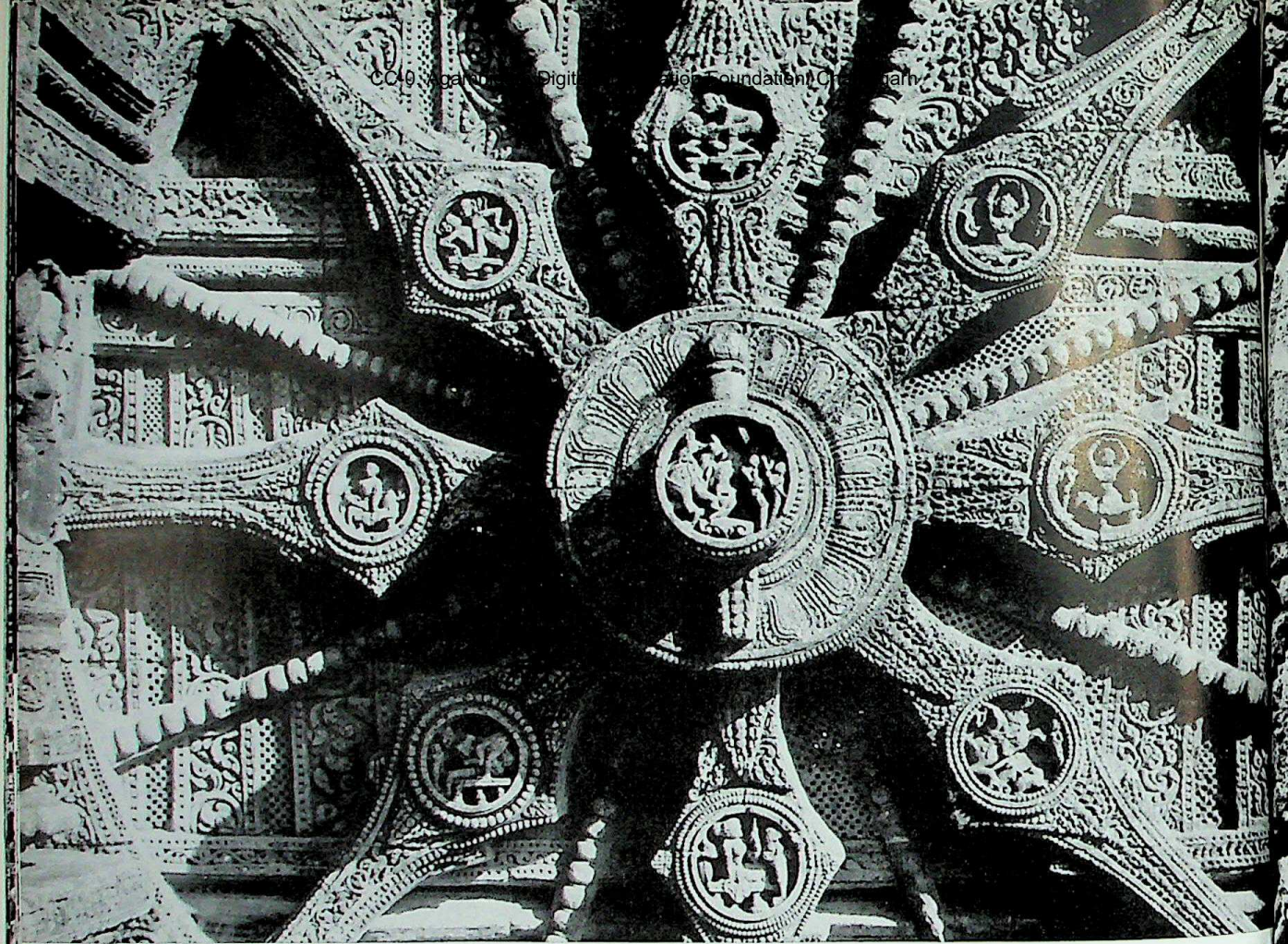

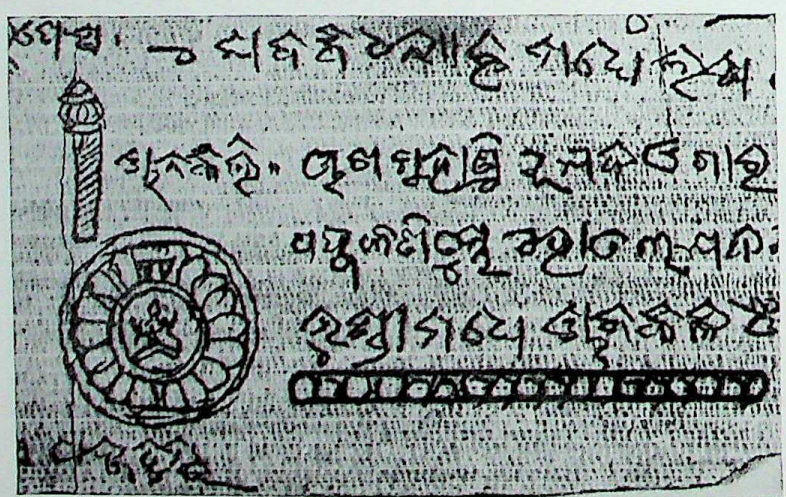

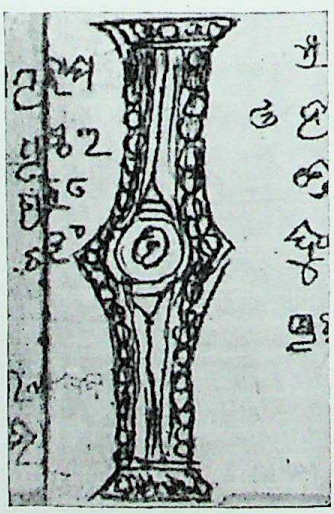

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

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CC-0. Agamnigam Digital Preservation Foundation, Chhattisgarh

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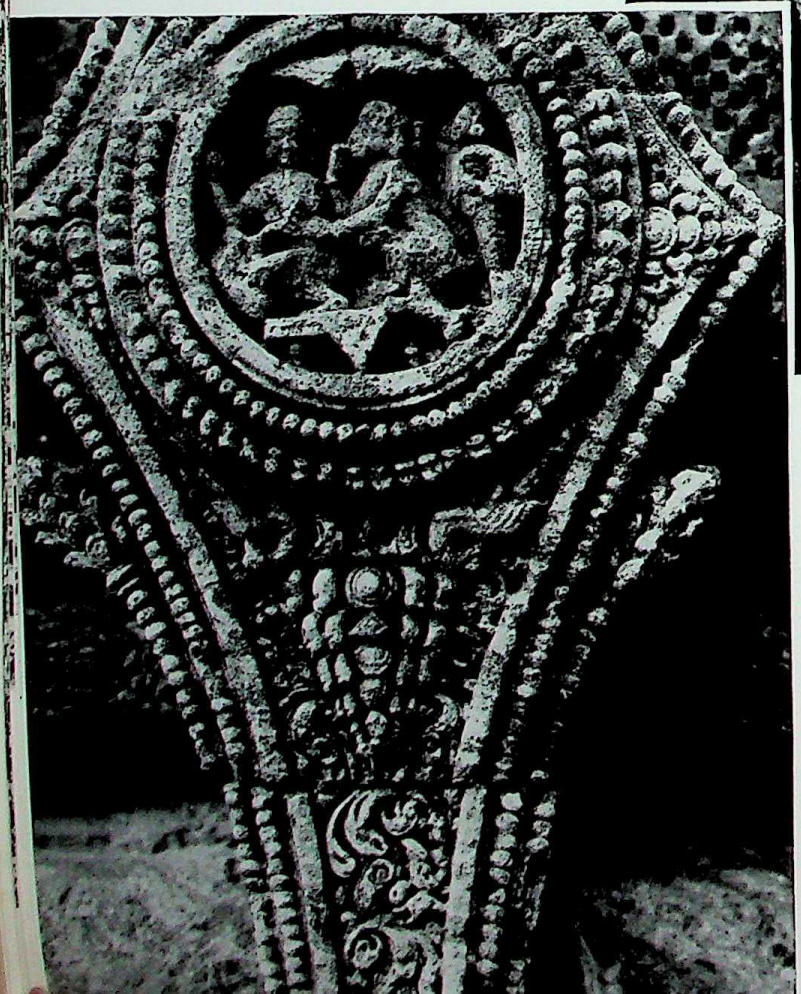

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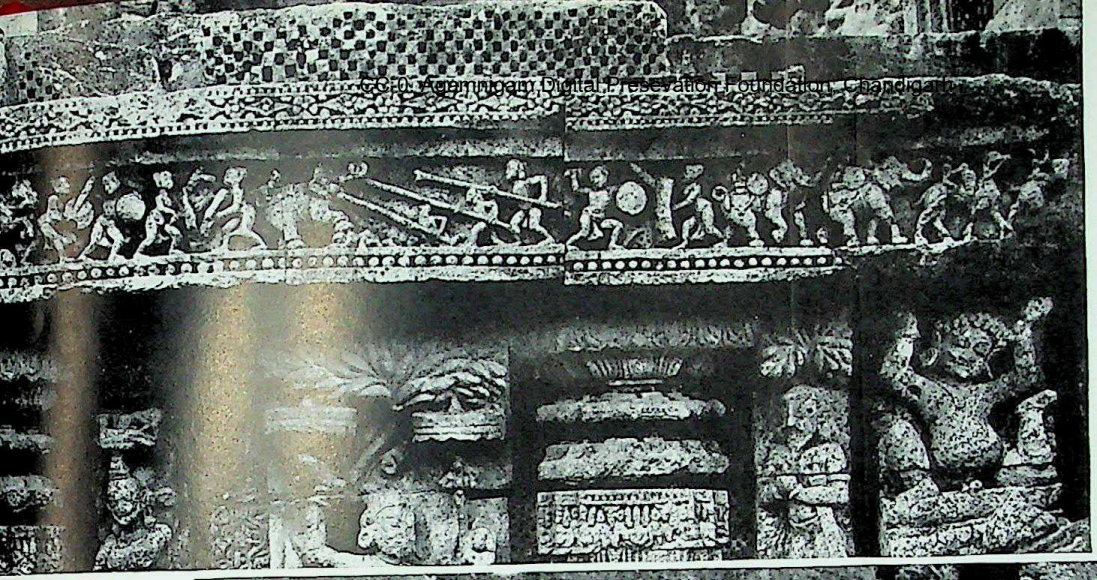

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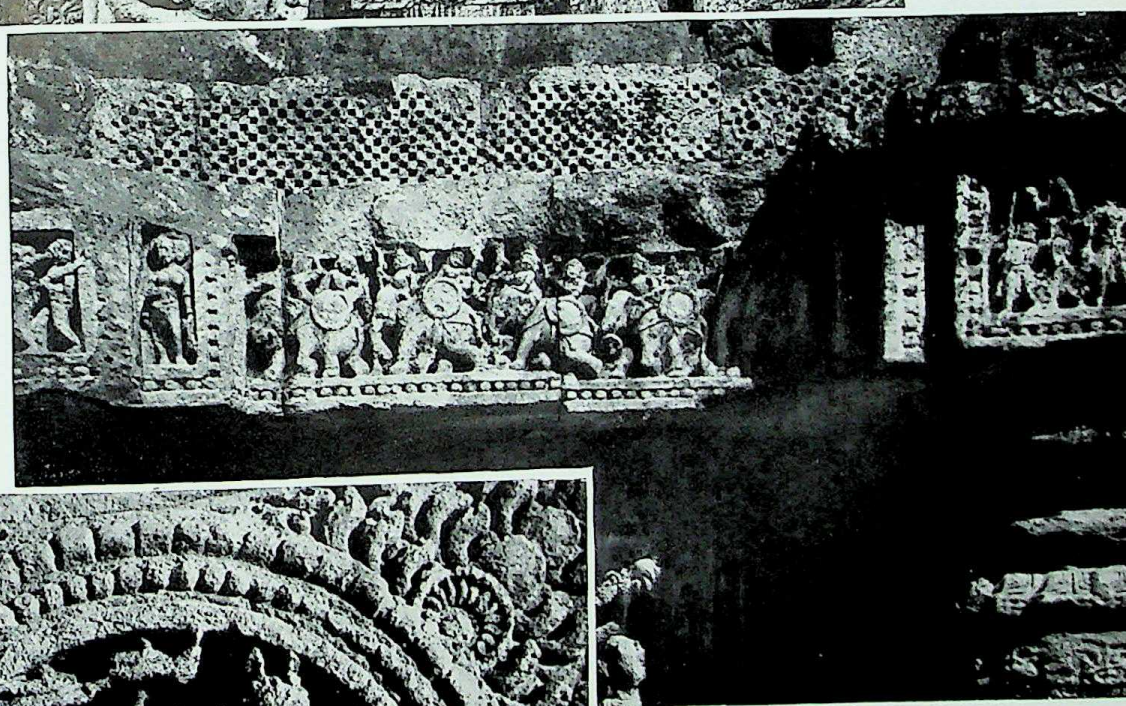
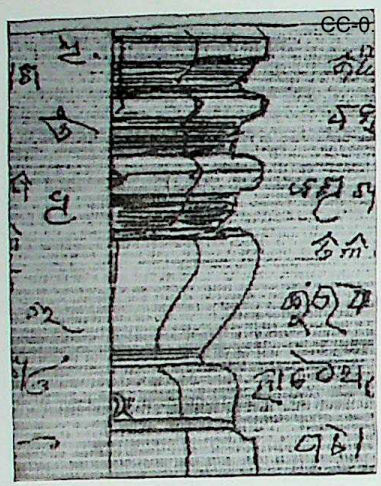
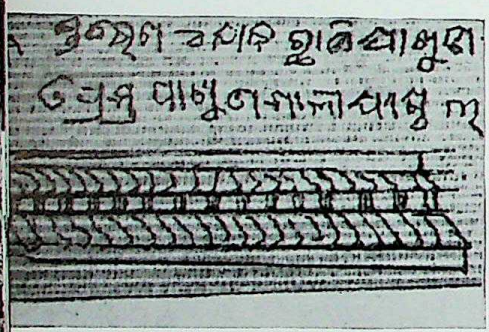


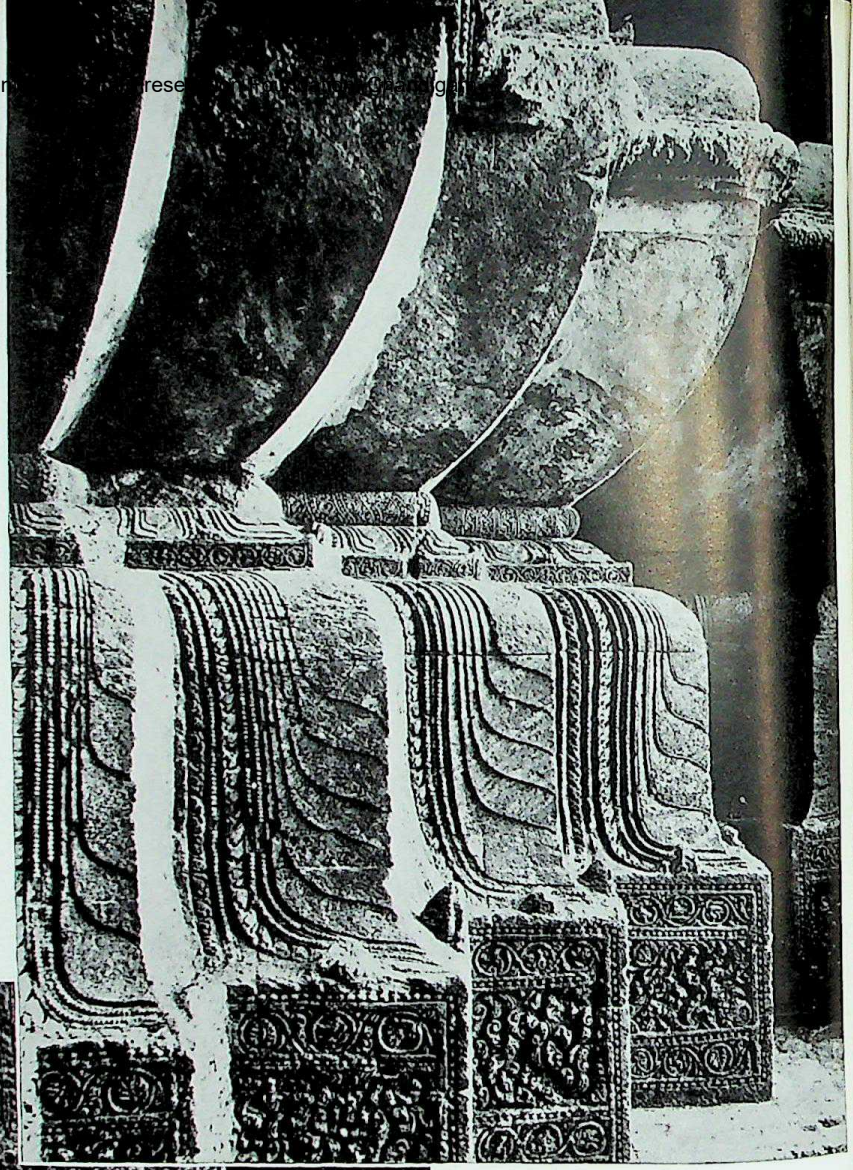
b

c

CC-0. Agamm... ...rese... ...Digitized by eGangotri







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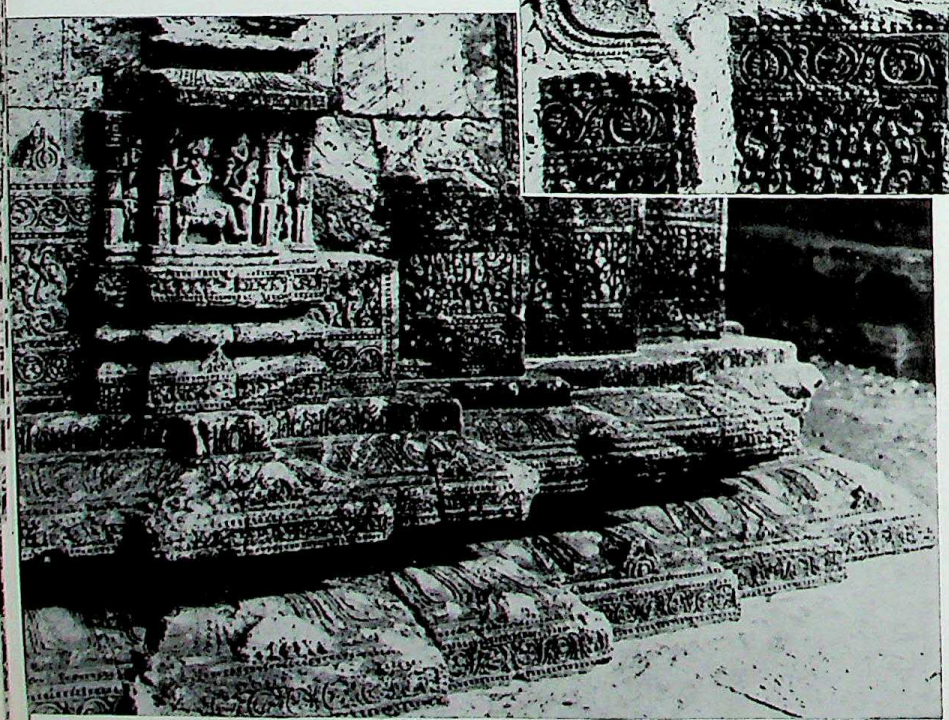

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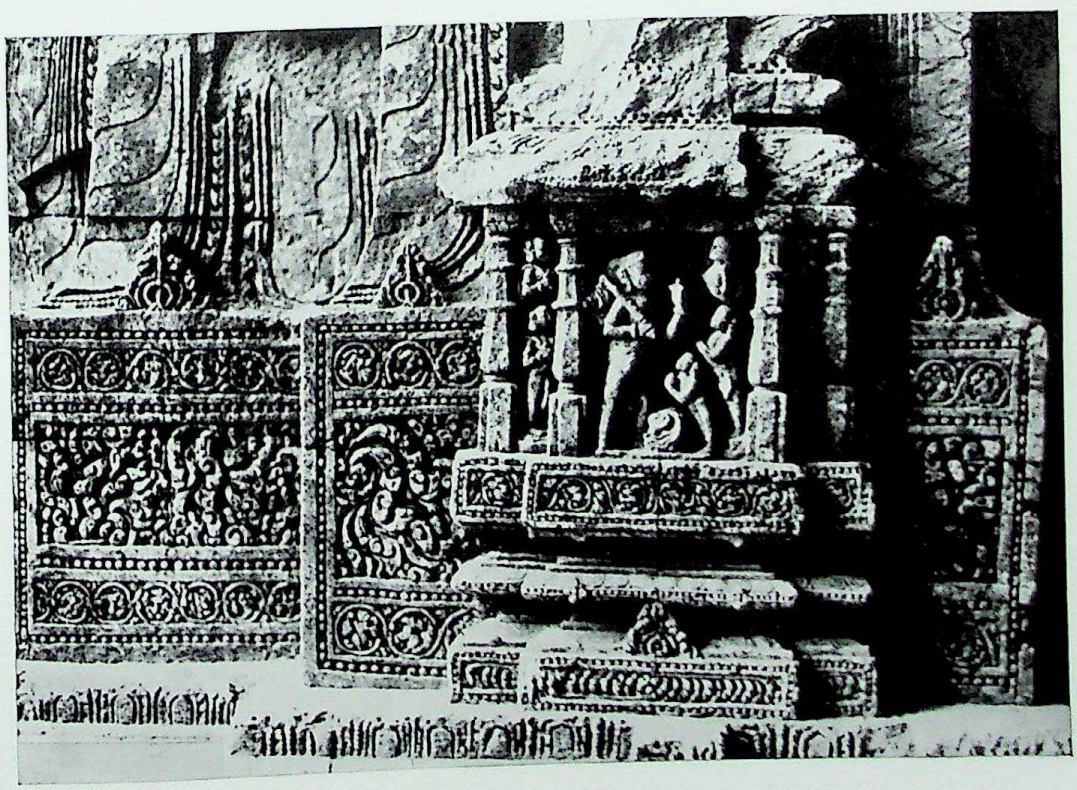

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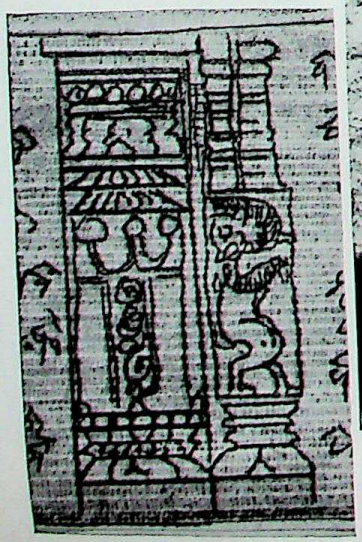

PL.31

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

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CC-0. Jangamwadi Math Collection. Digitized by eGangotri

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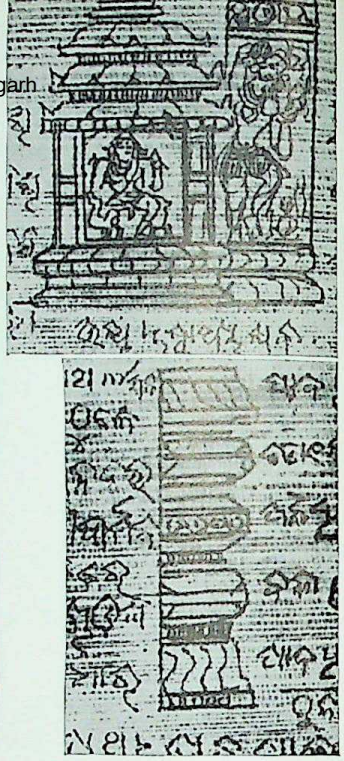
b



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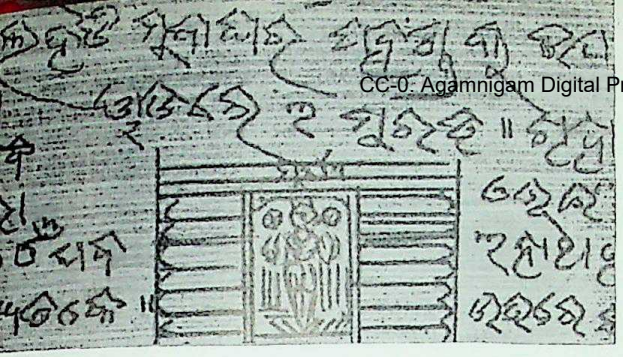

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CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

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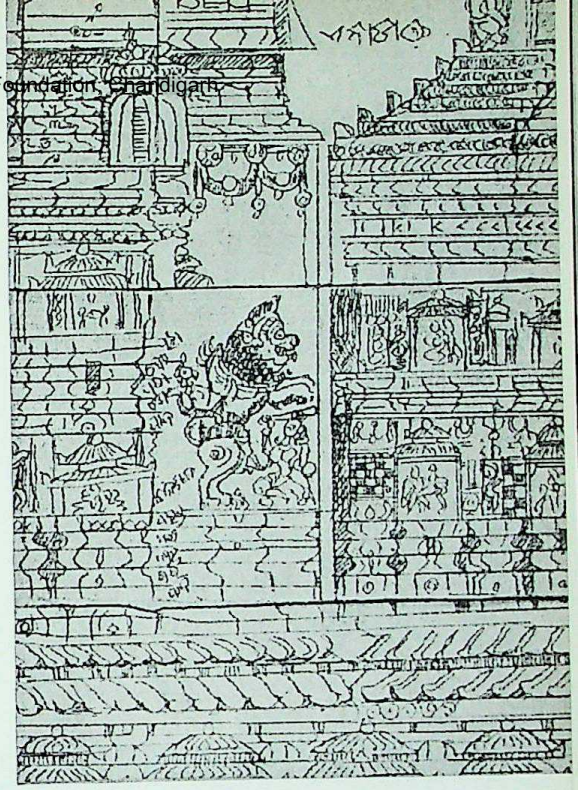


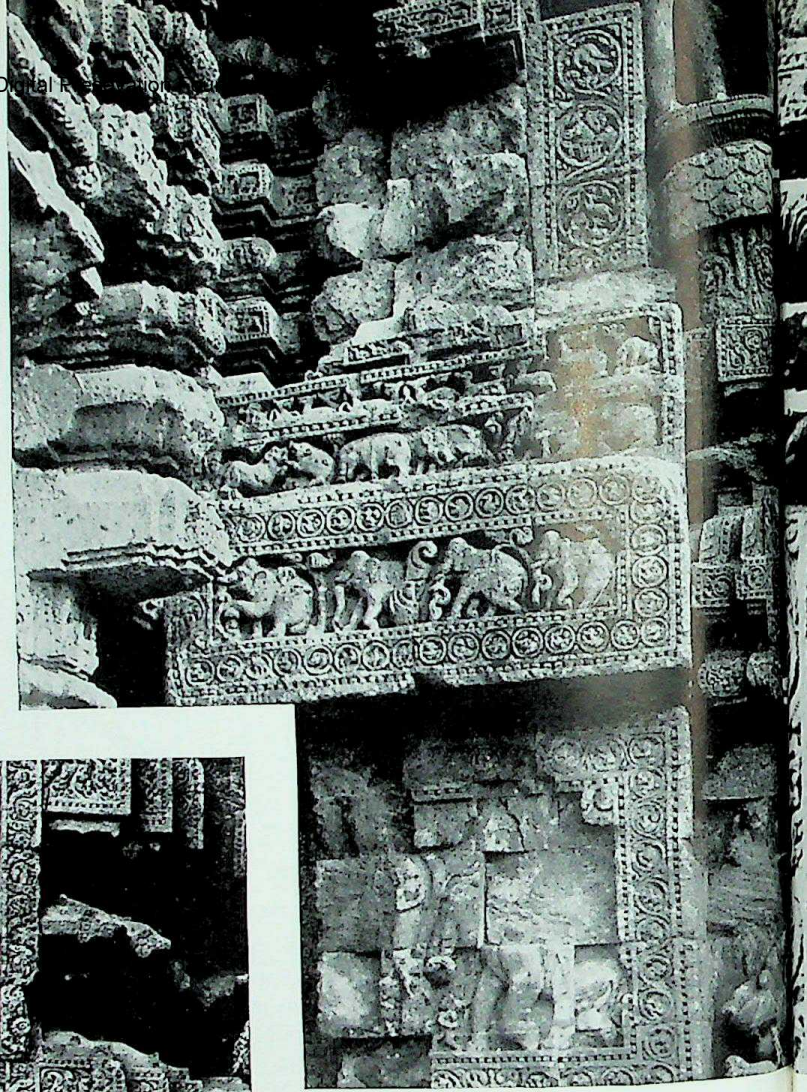
b

PL.36

a

c

CC-0. Agamnigam Digital Preservation



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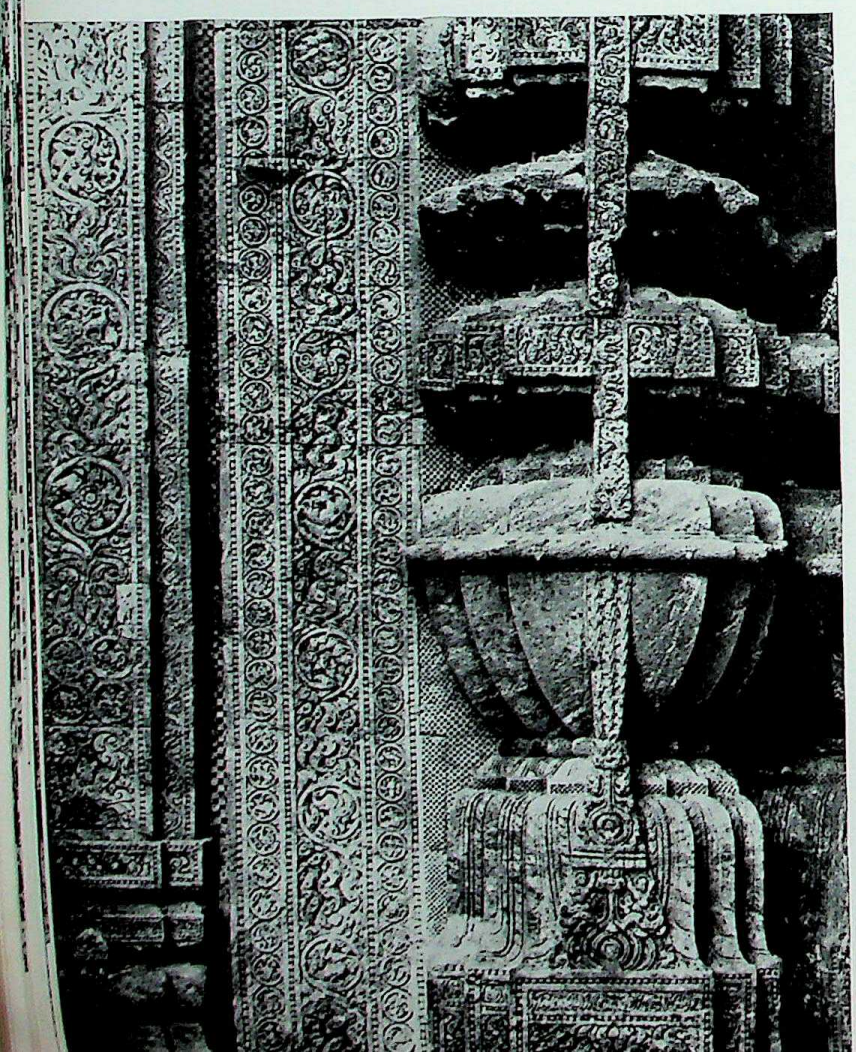

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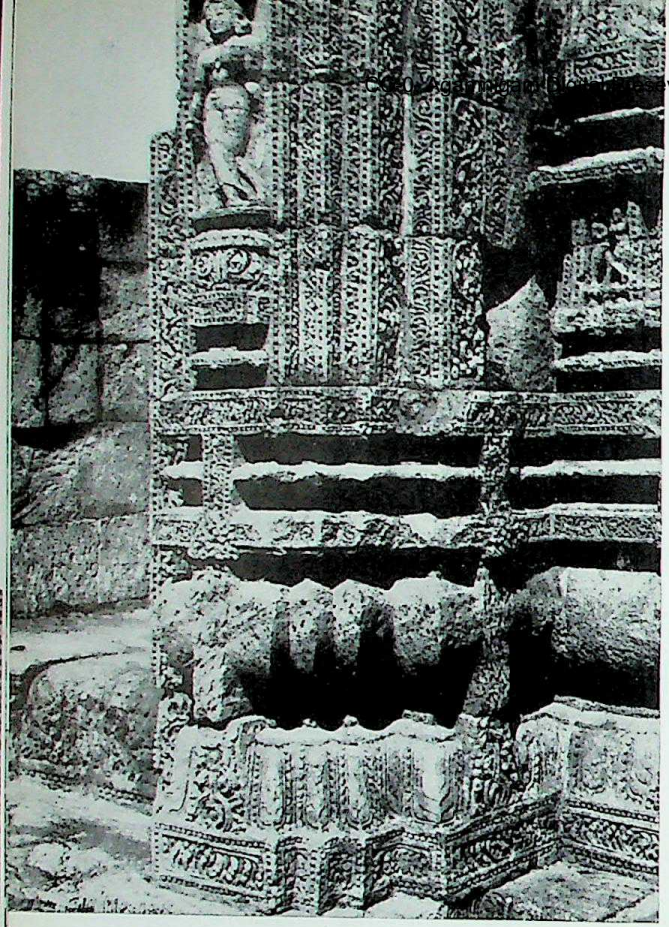
CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

PL.38 b

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh



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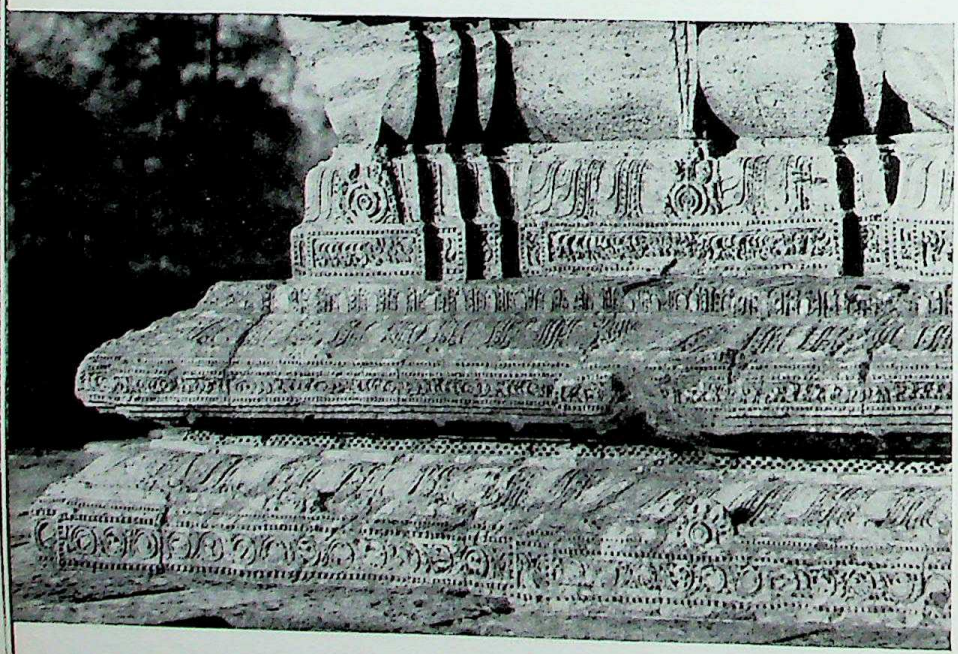

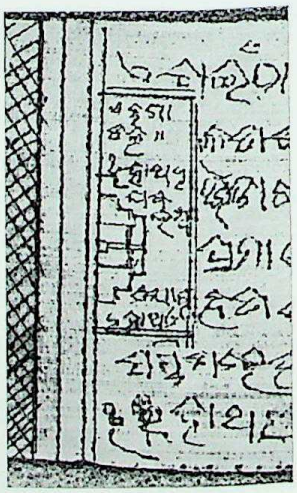

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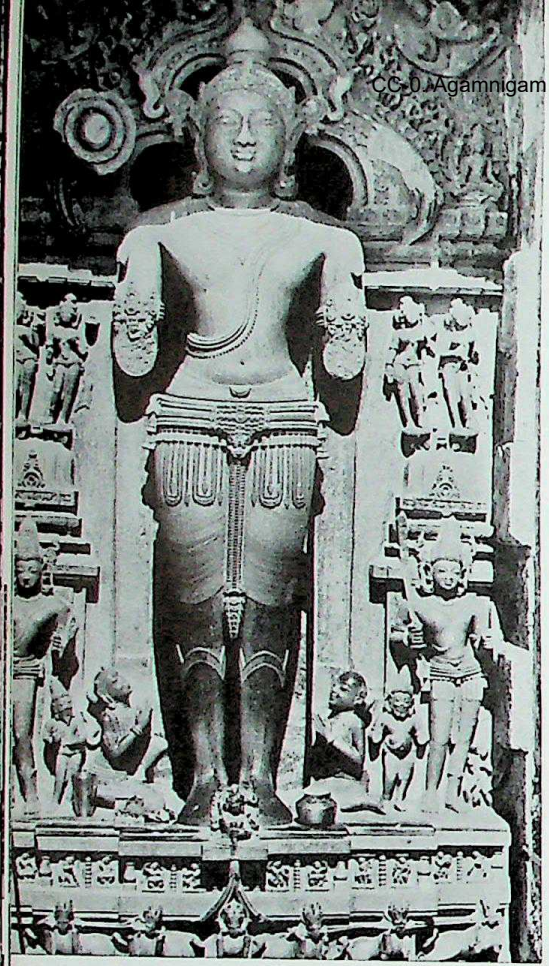
CC-0. Agamnigam D... Foundation, Chandigarh



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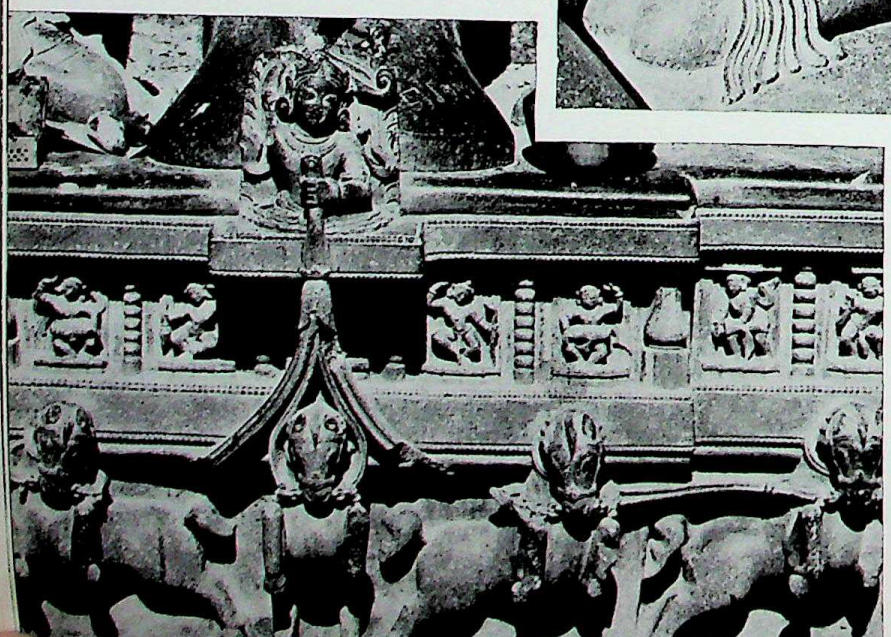

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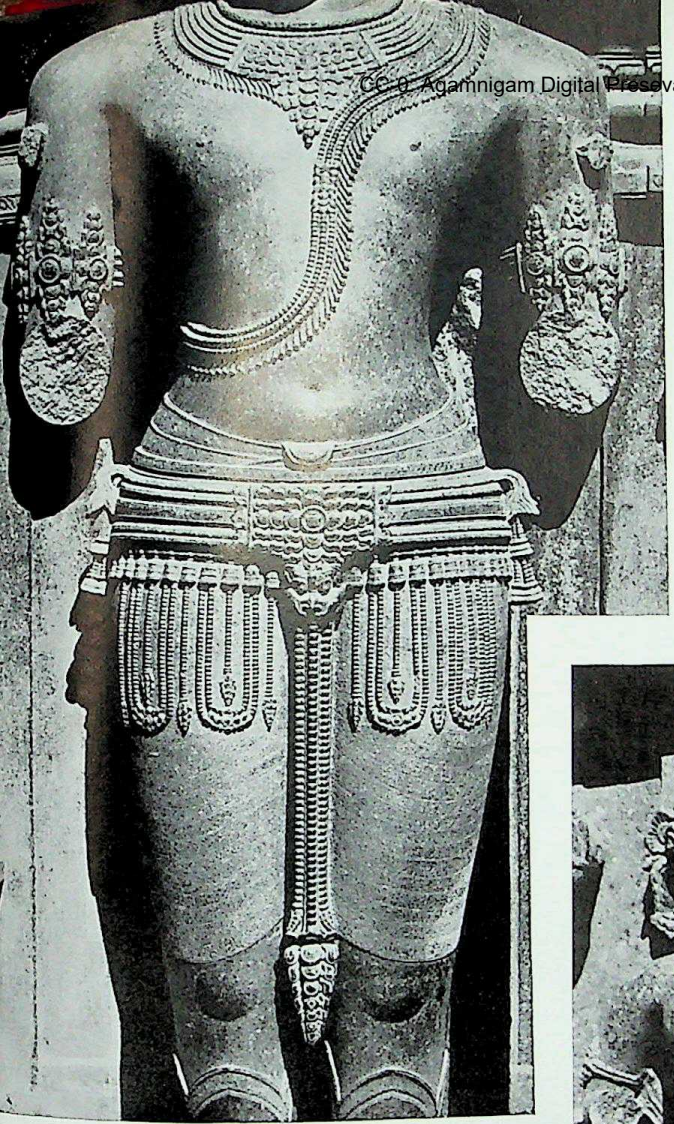

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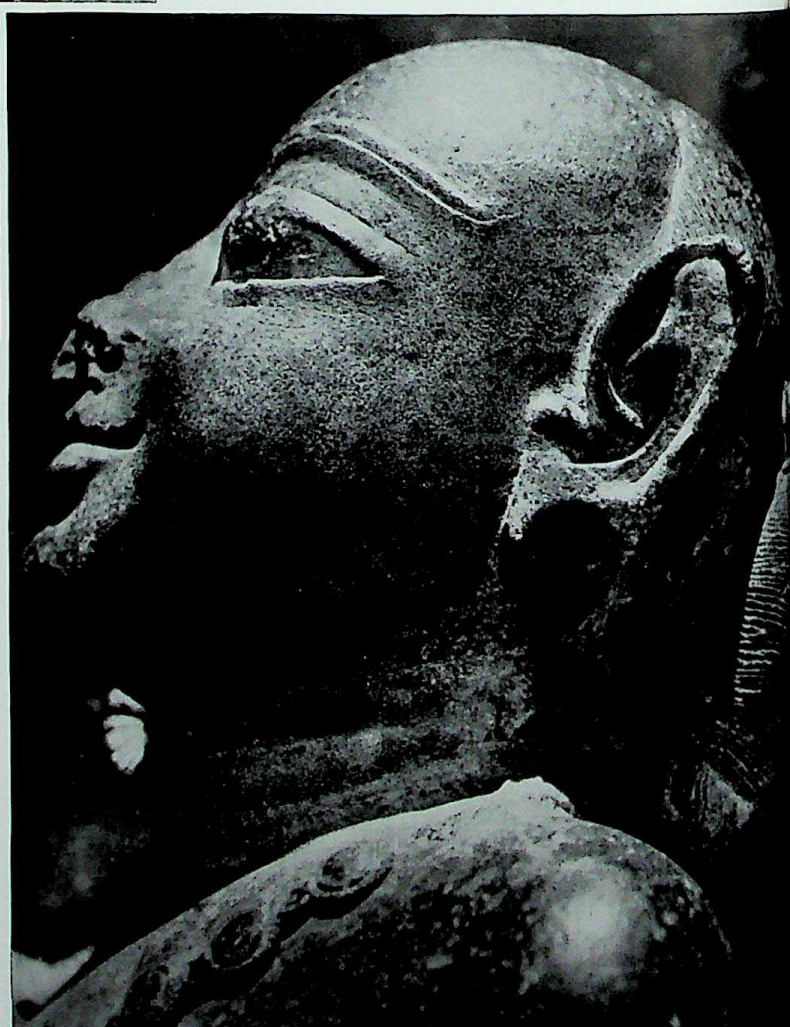

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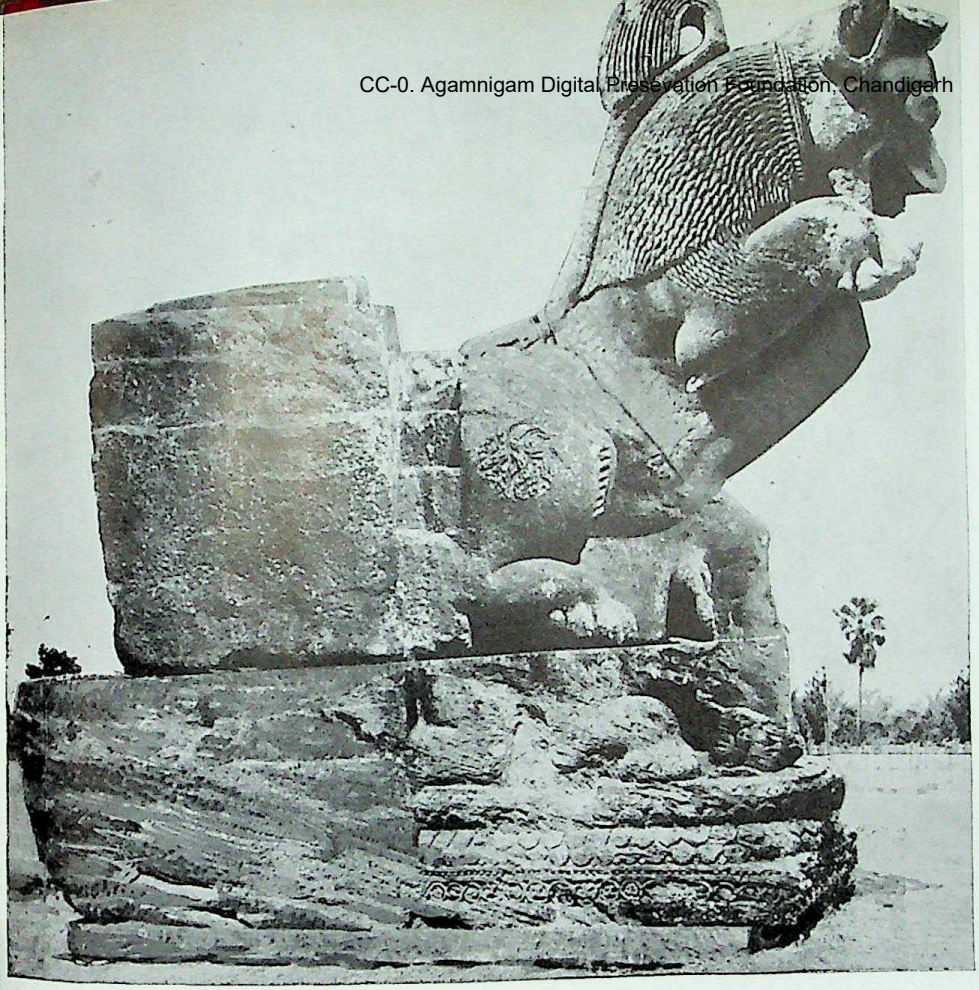

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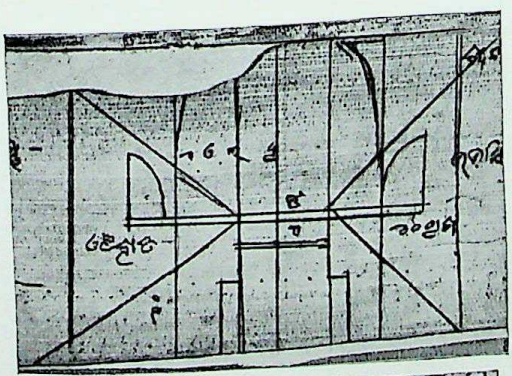

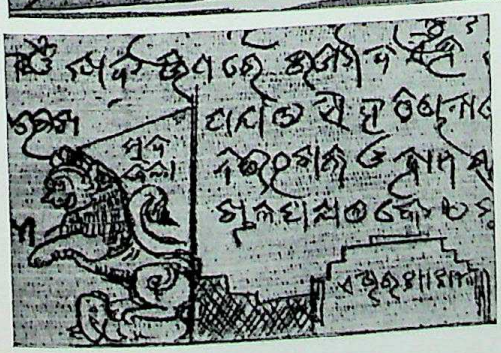

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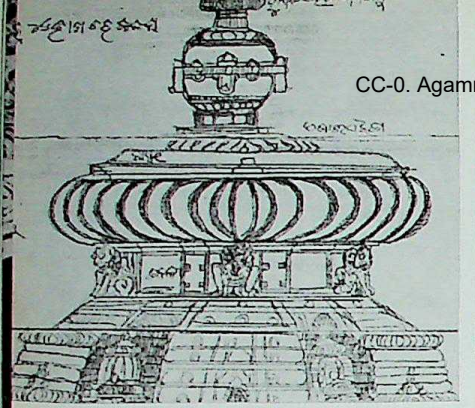

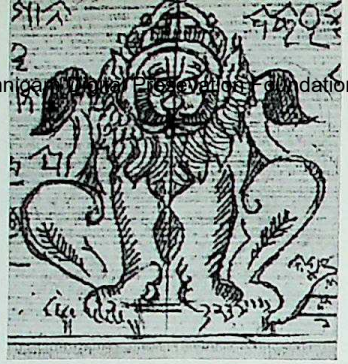

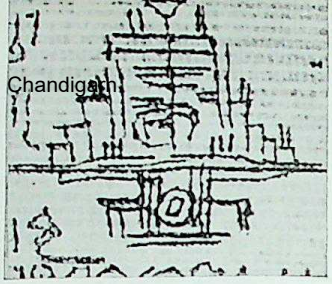

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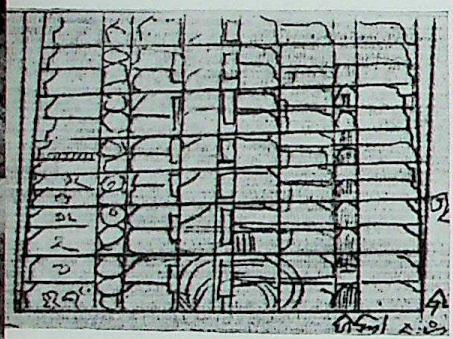

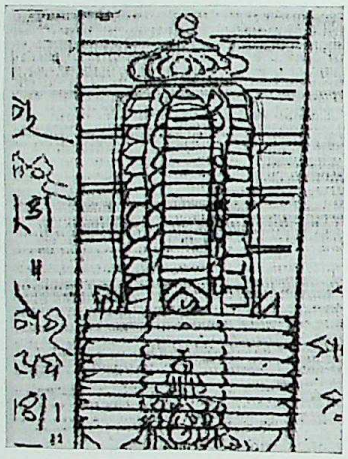

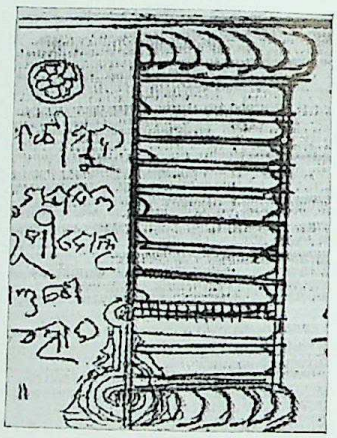

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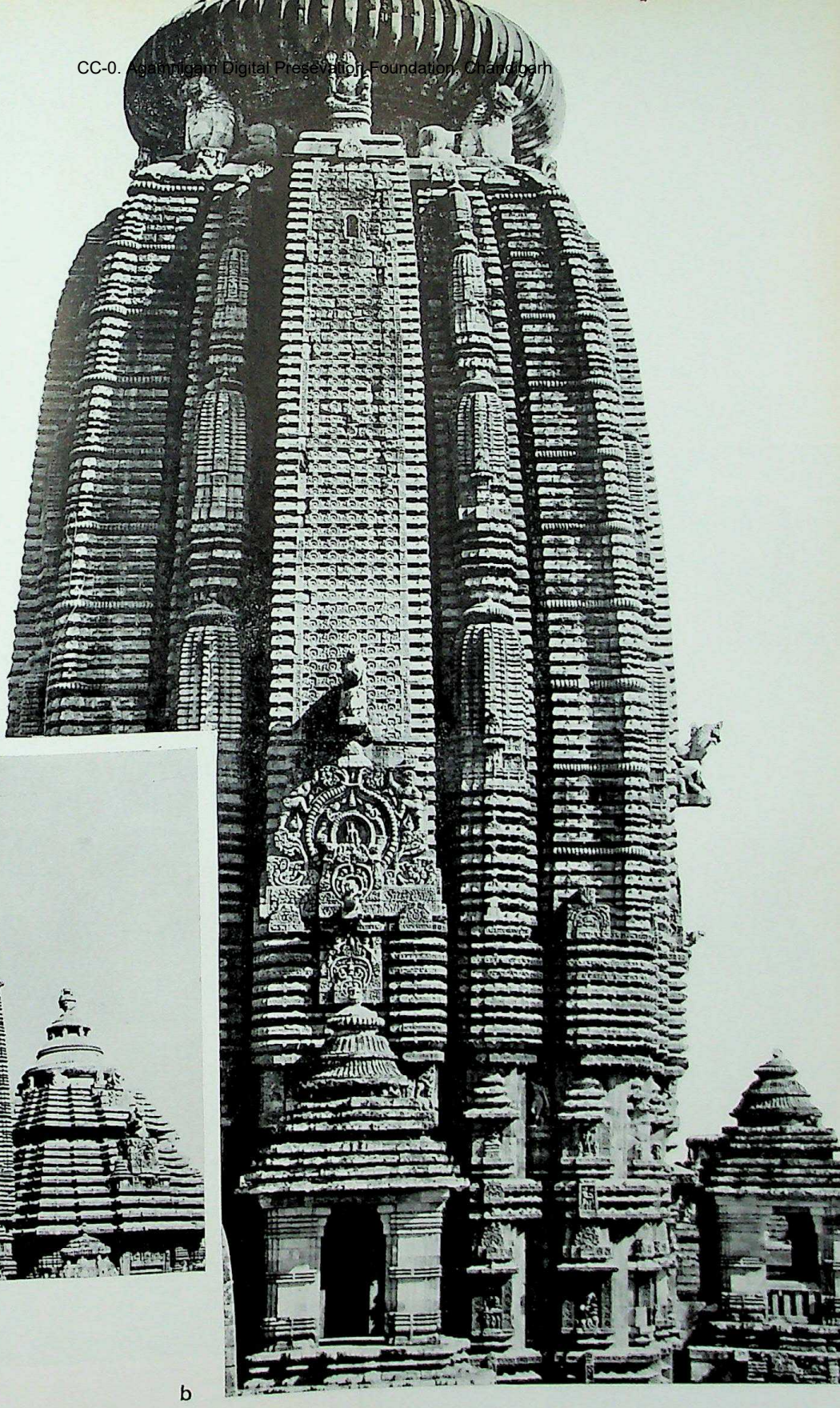
PL.47

CC-0. Agamnigam Digital Preservation Foundation, Chandigarh



a

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PL.48

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

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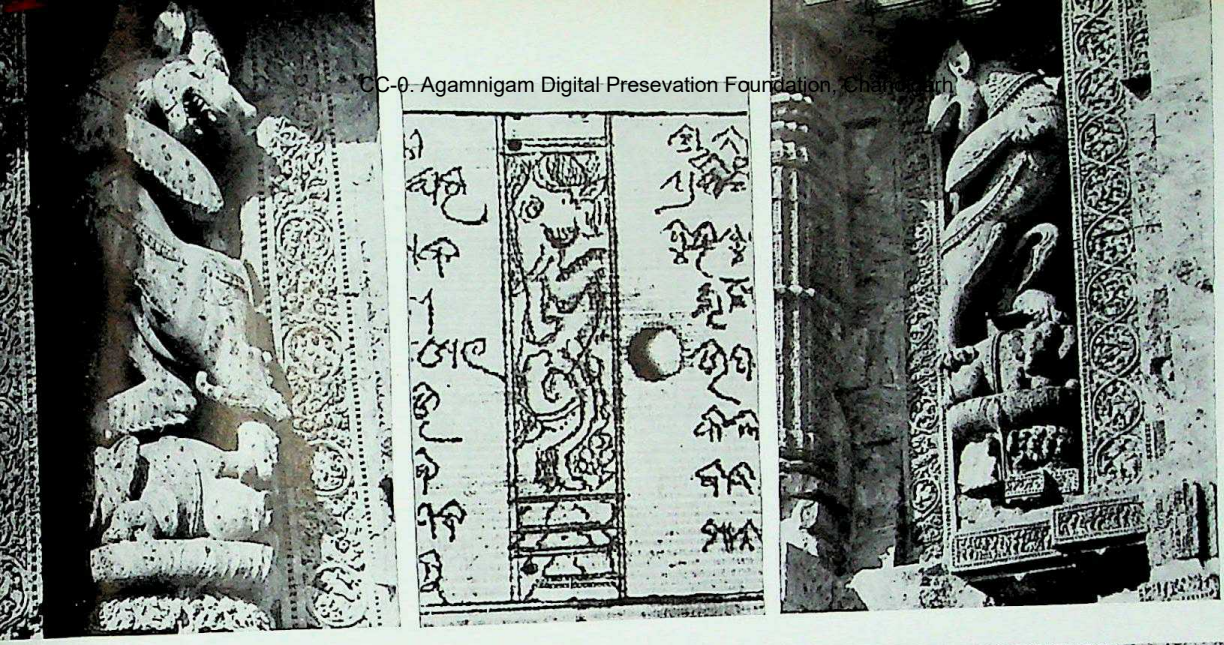
b

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



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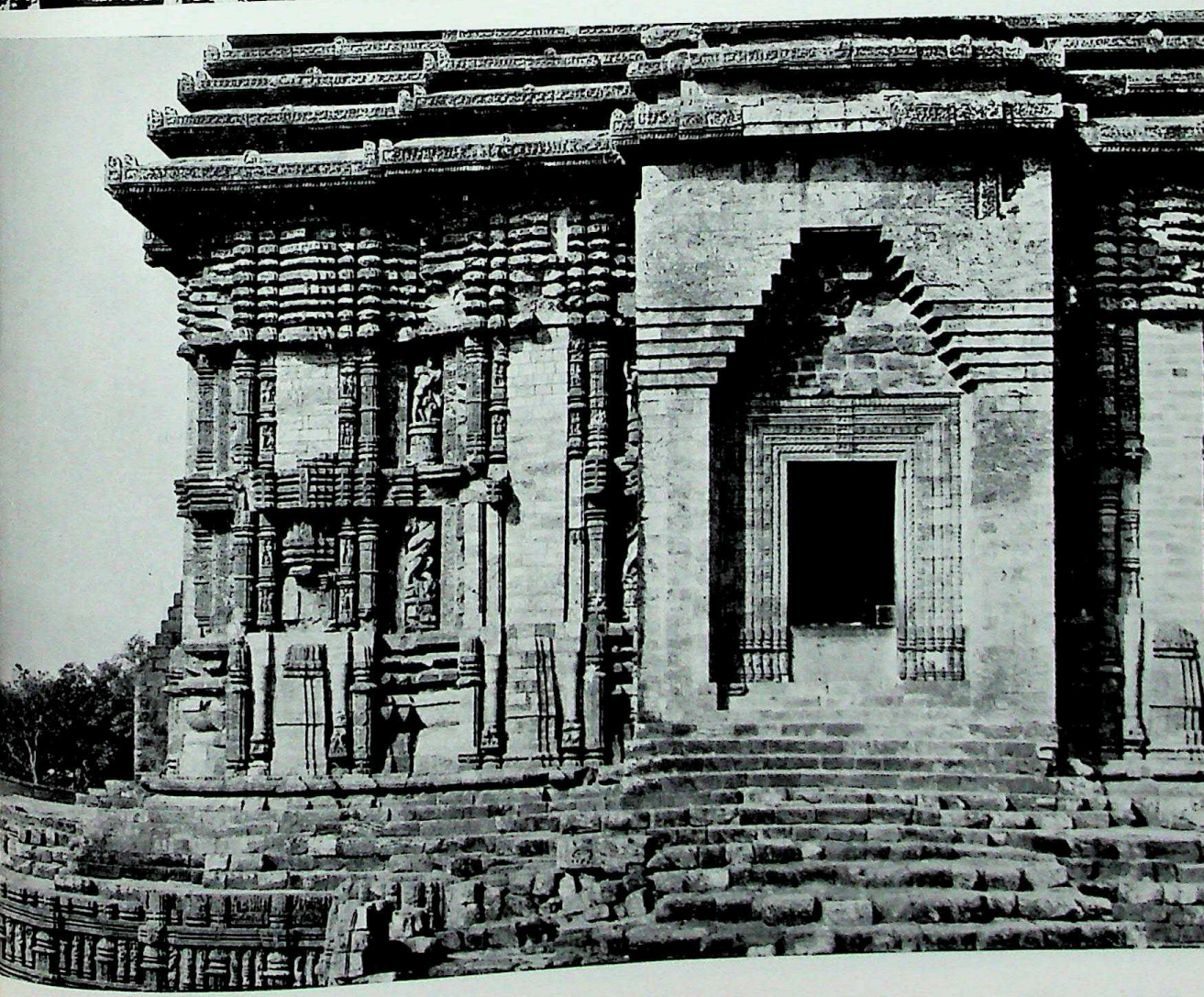

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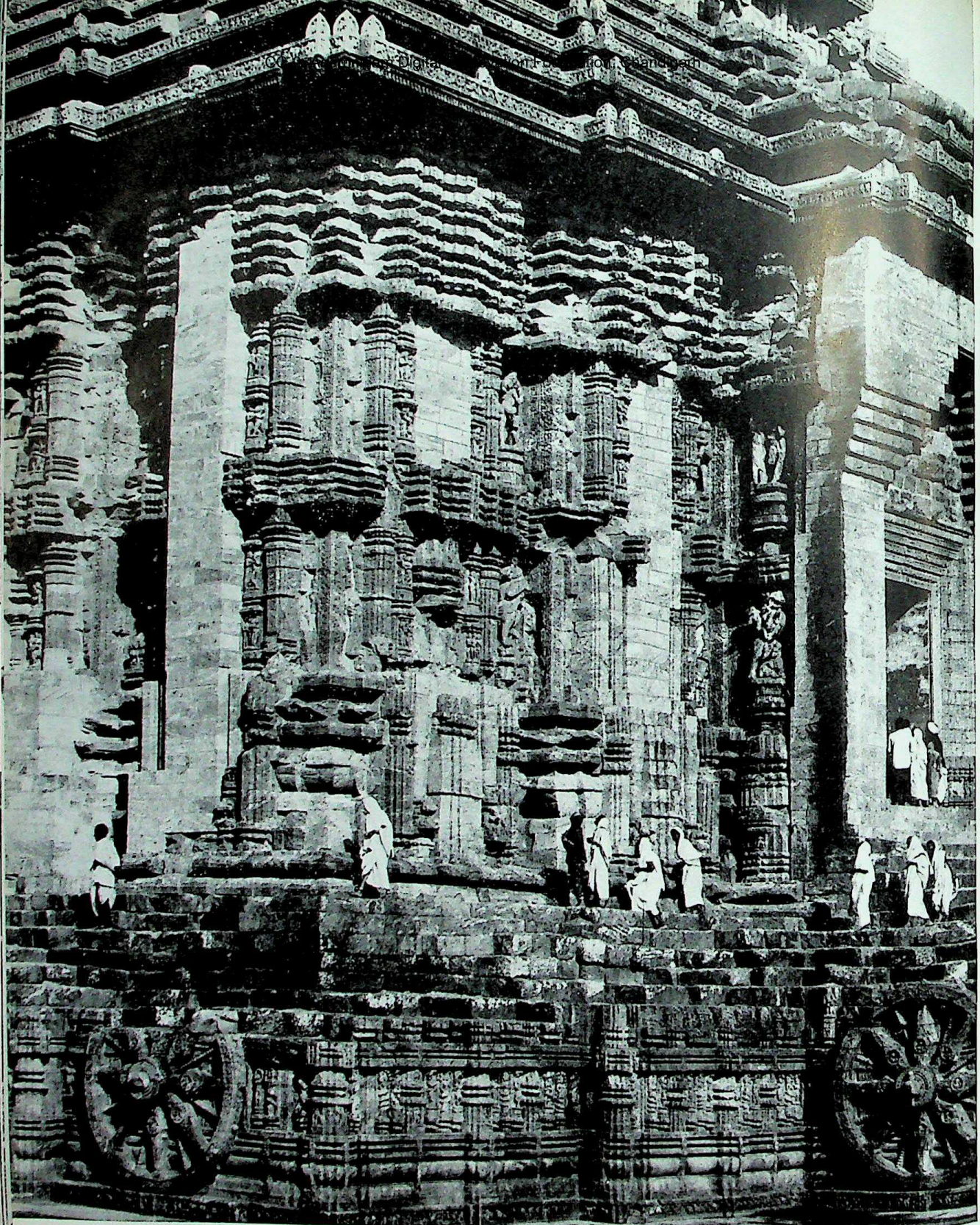
CC-0. Panjab Digital Library Collection, Chandigarh



PL.51

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

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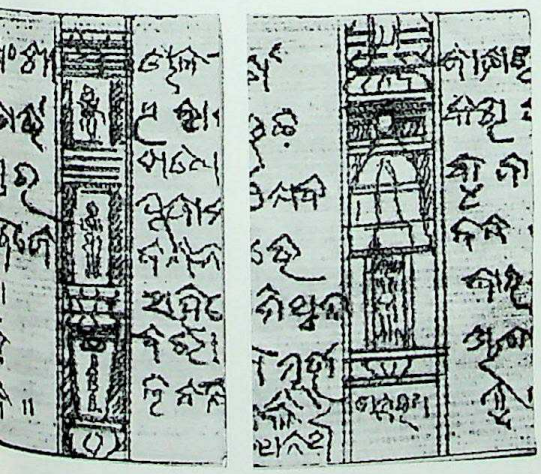

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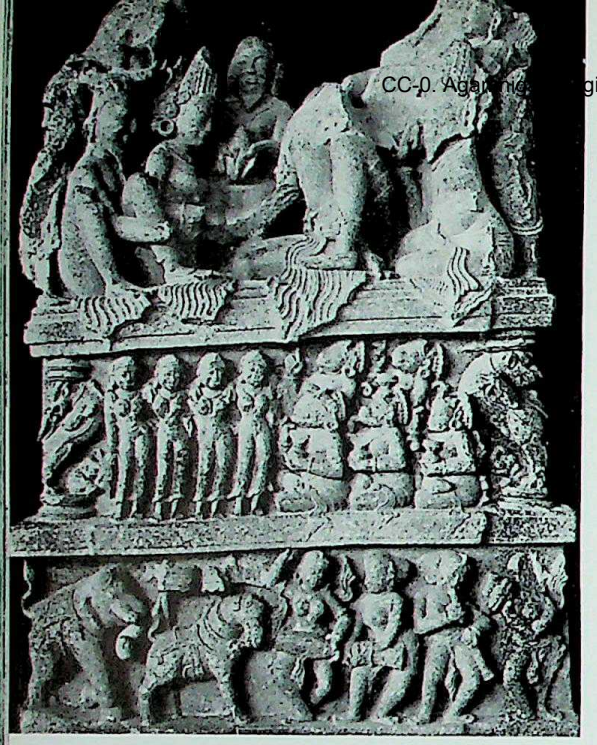

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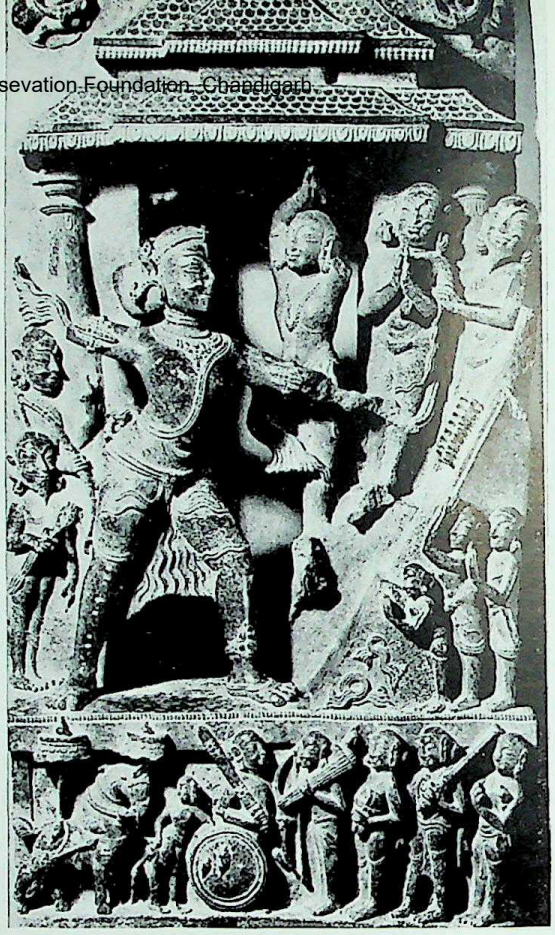

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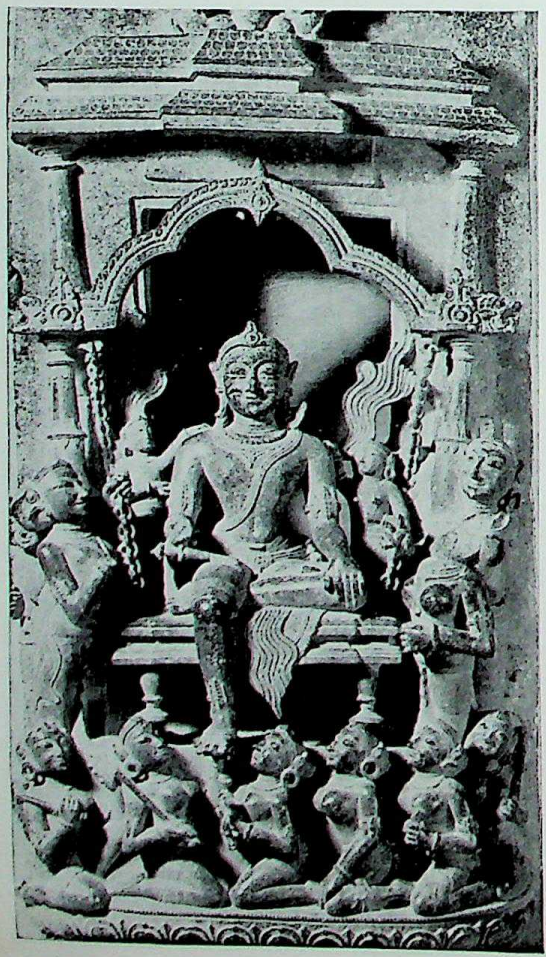

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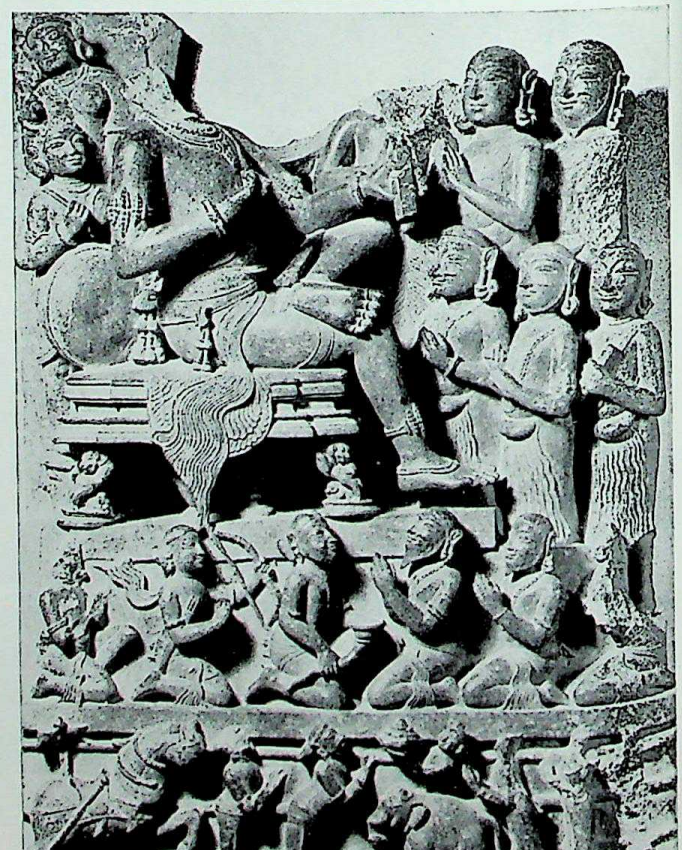

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CC-0. Panjab Digital Presevation Foundation, Chandigarh

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Agamnigam Digital Presevation Foundation, Chandigarh

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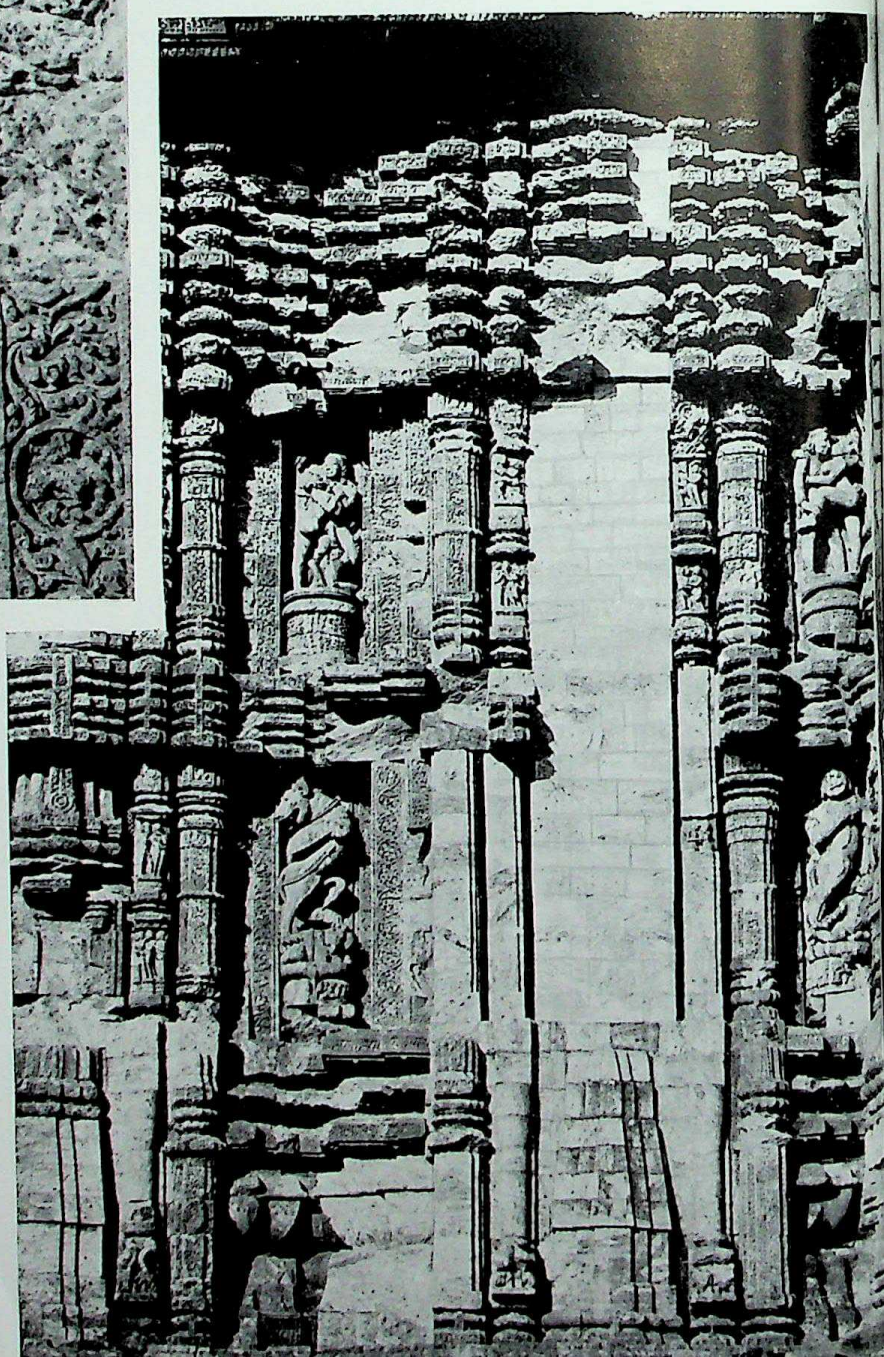

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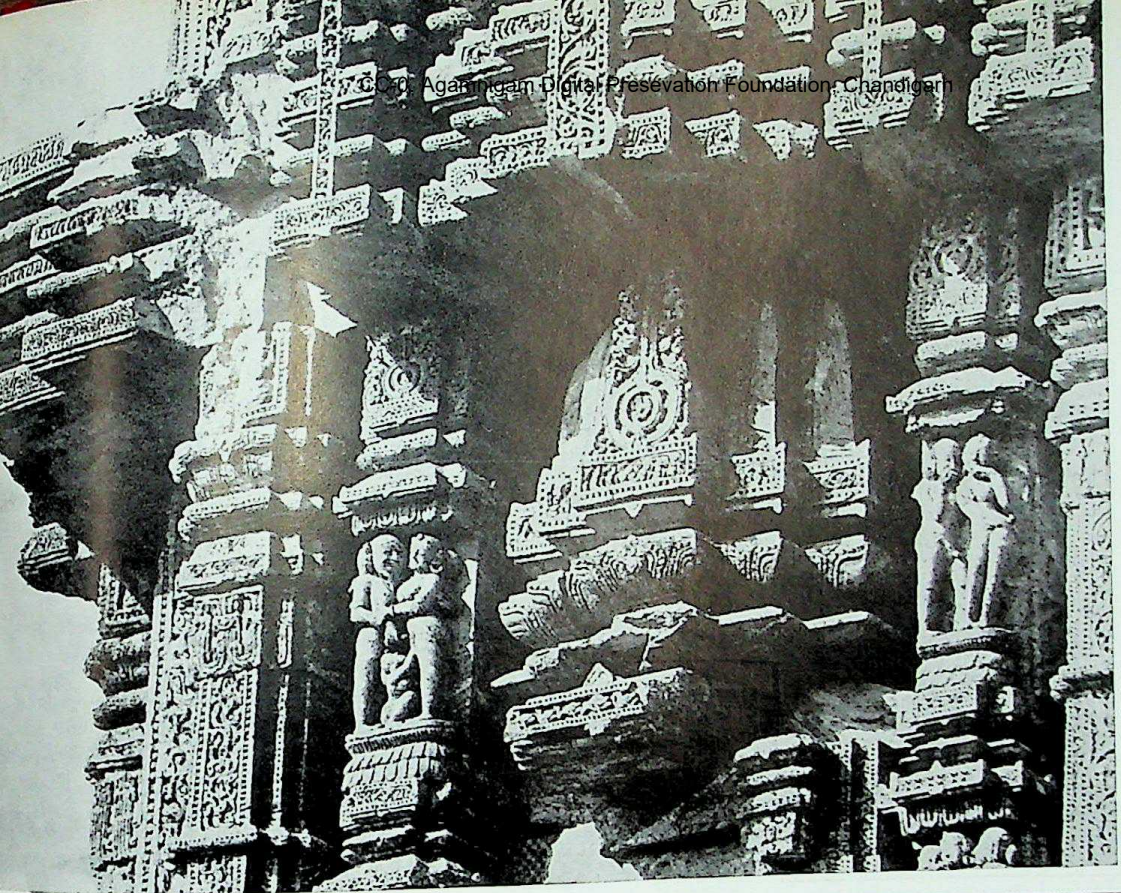

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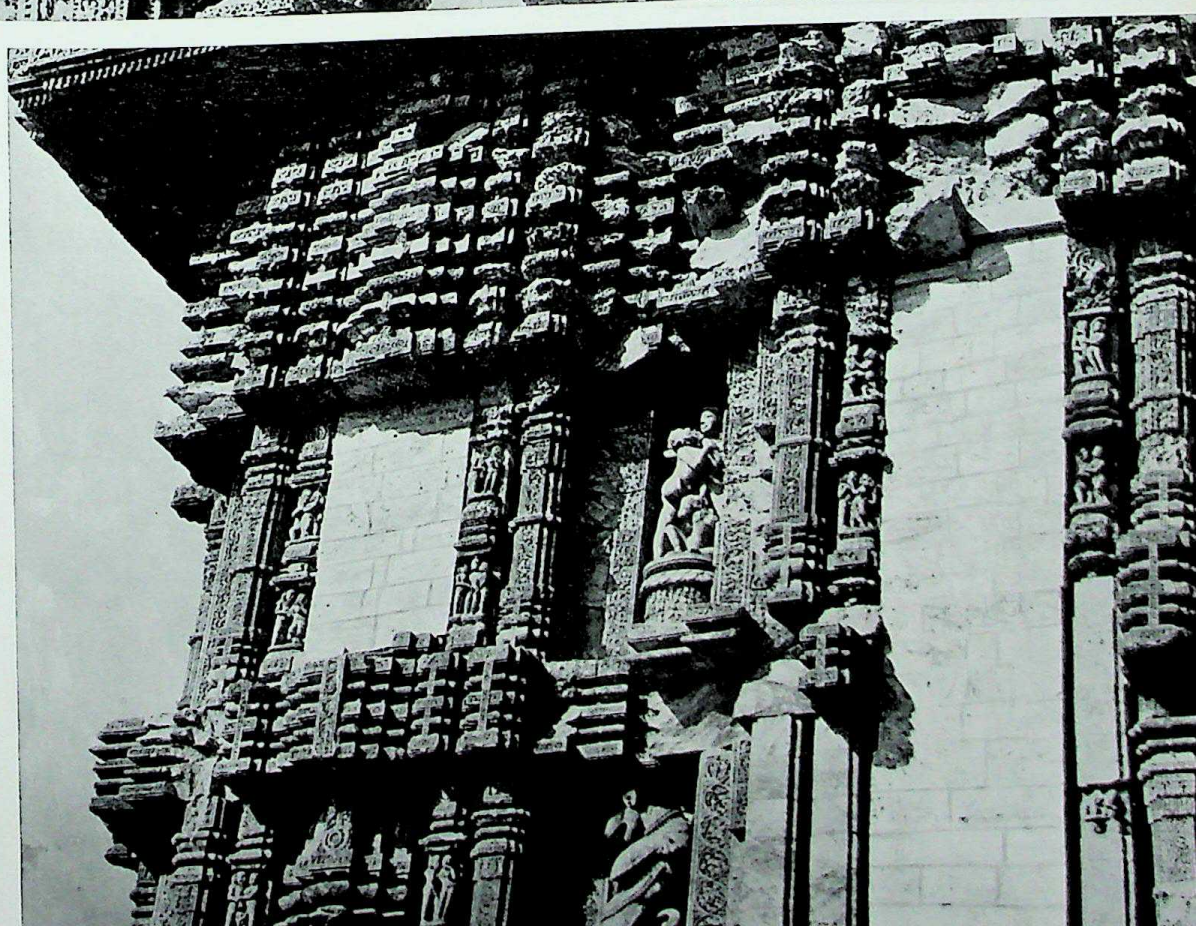

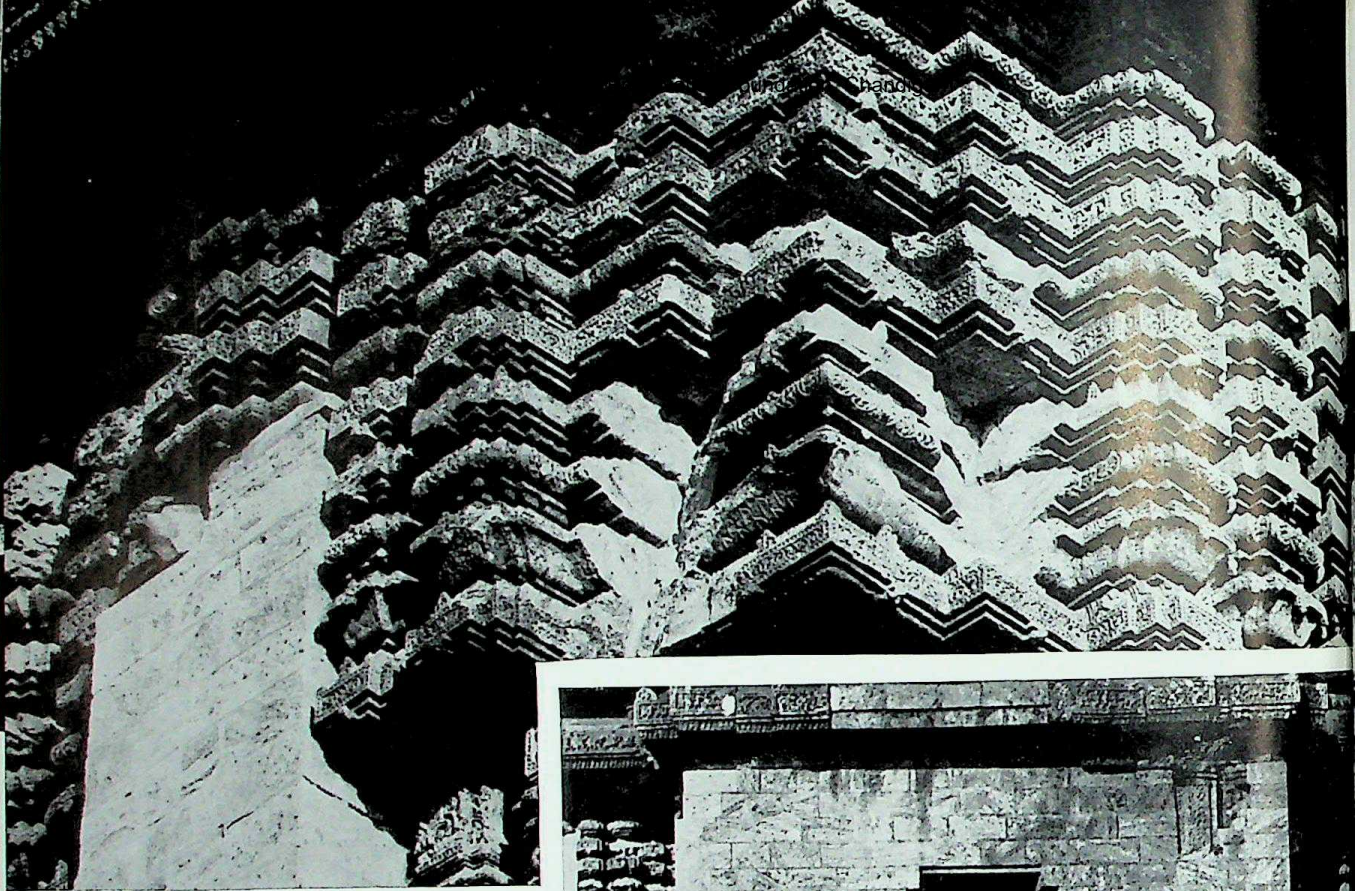

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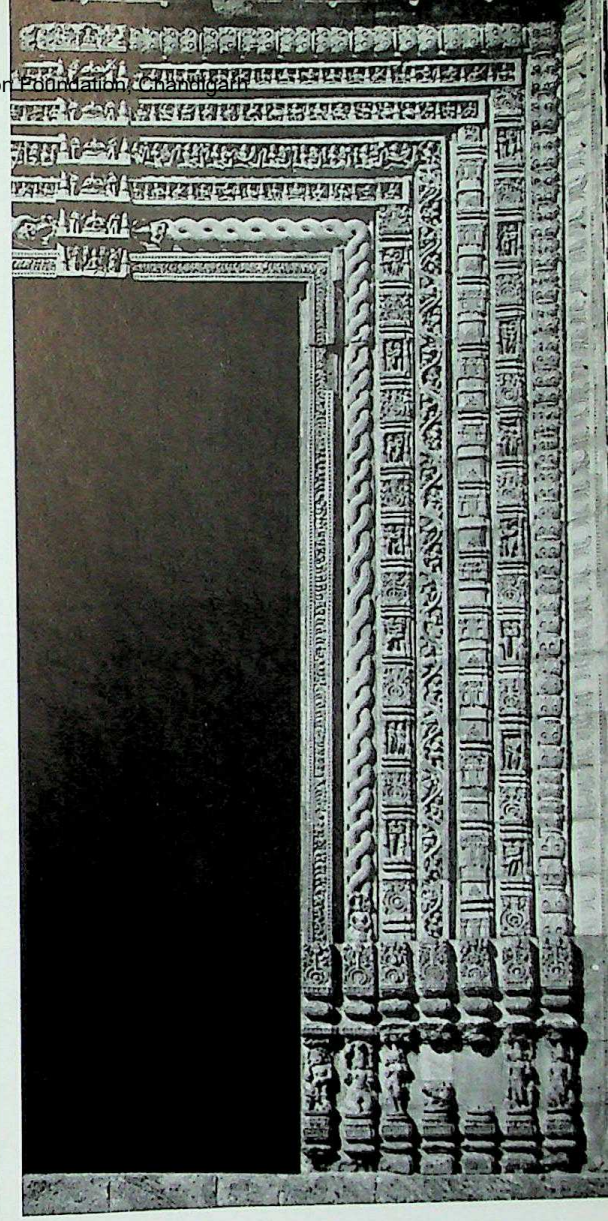

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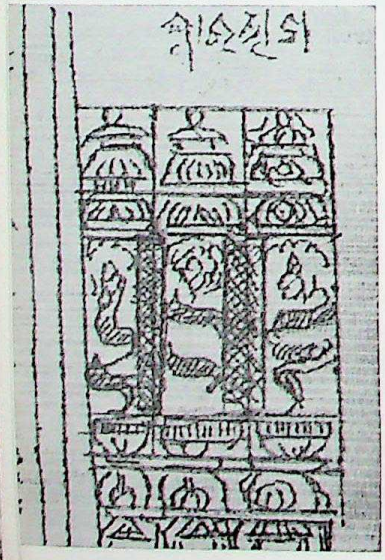

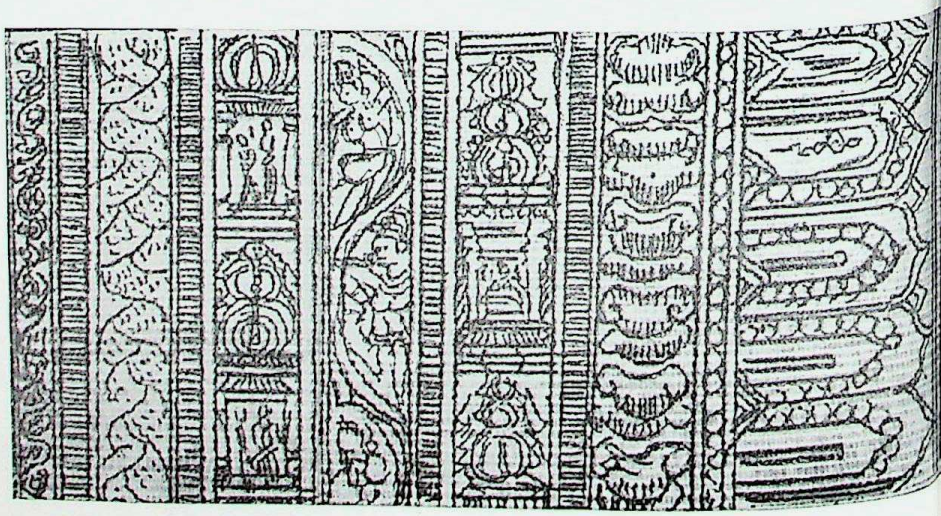

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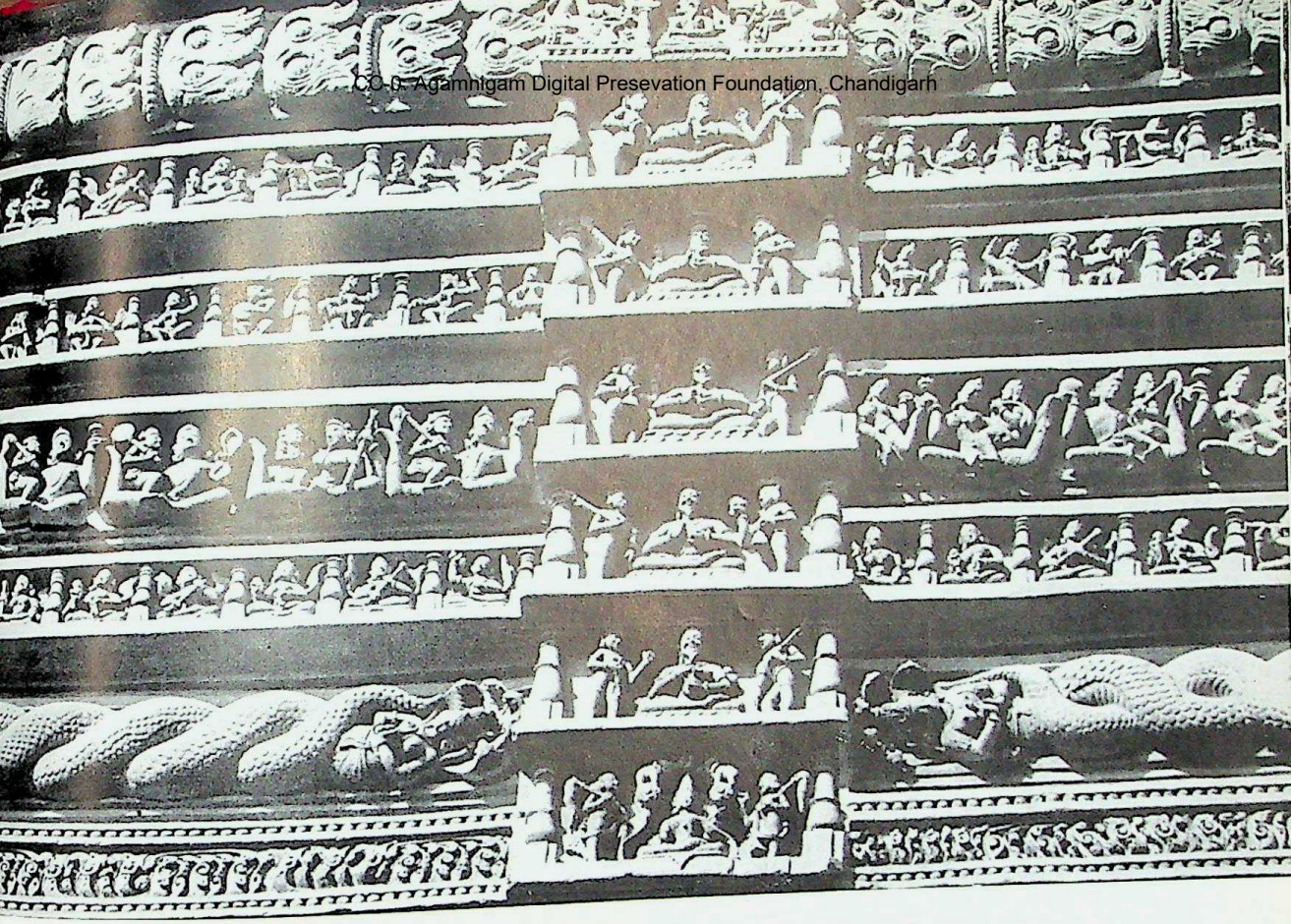

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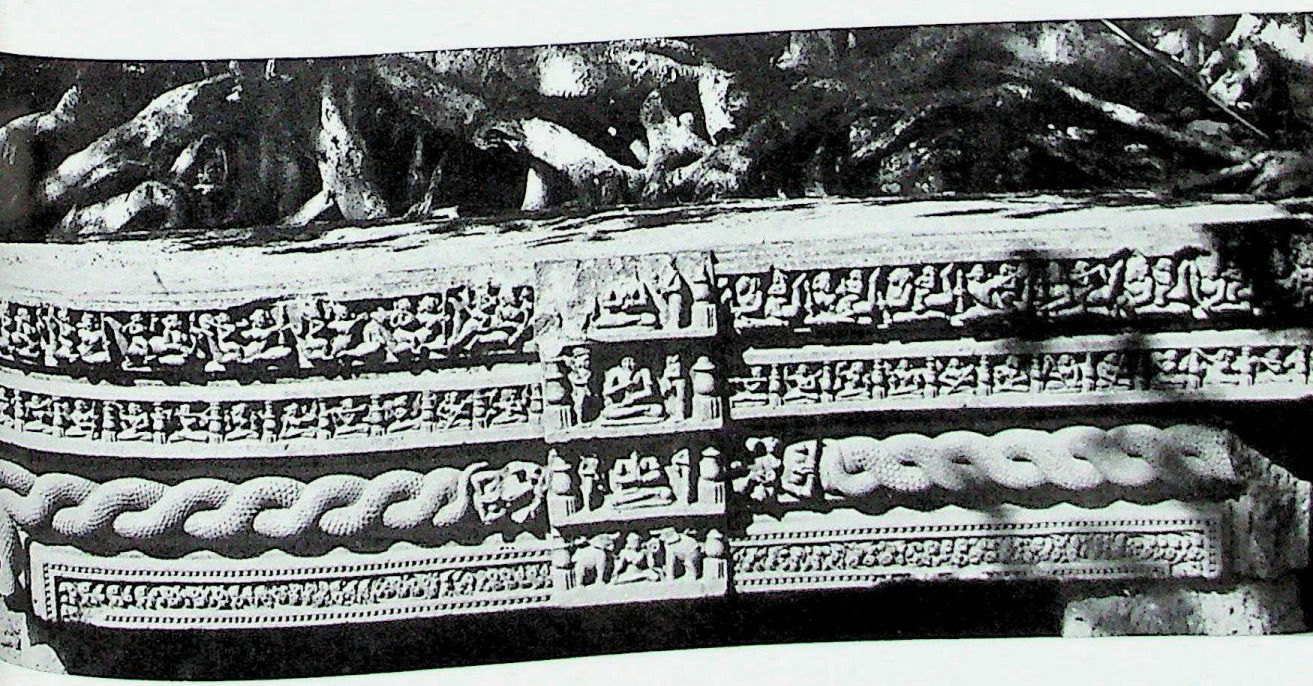

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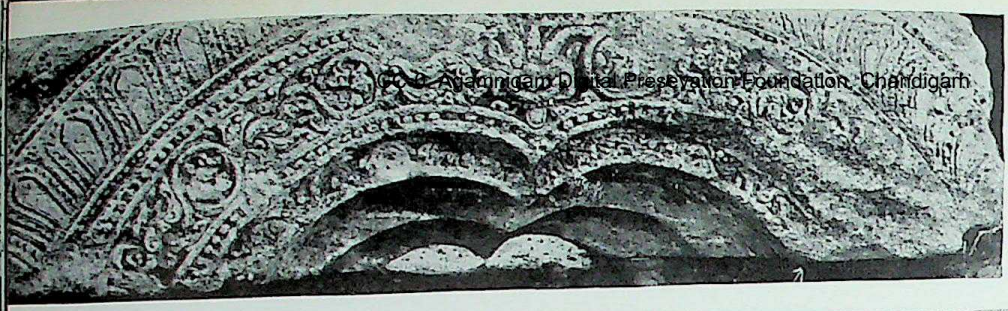

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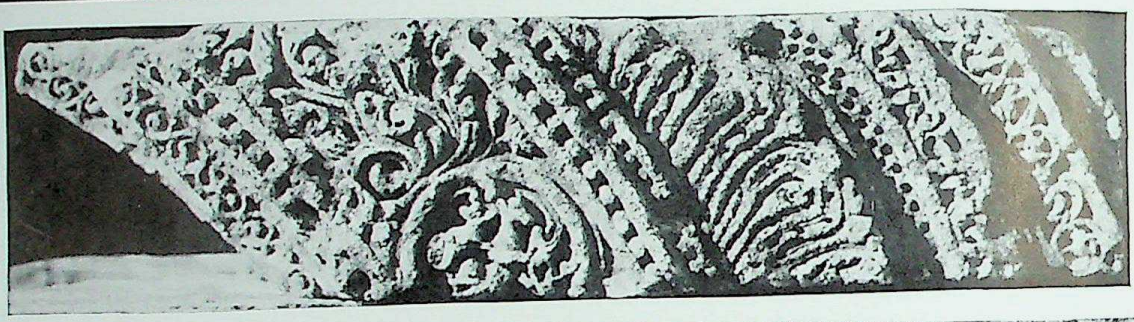

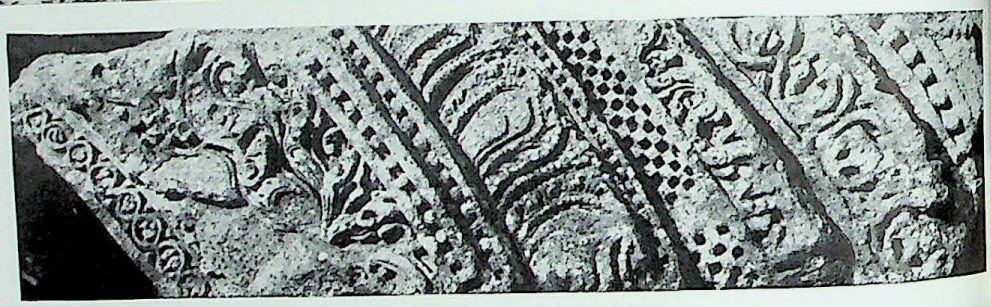

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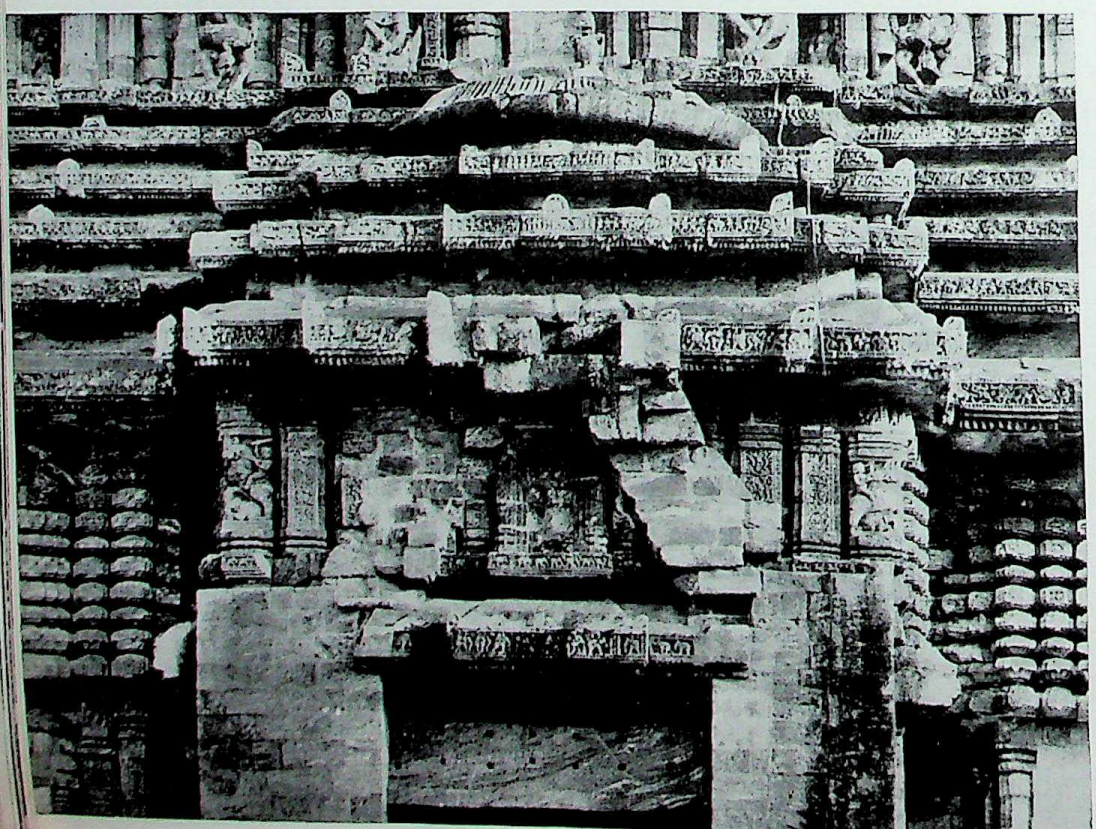

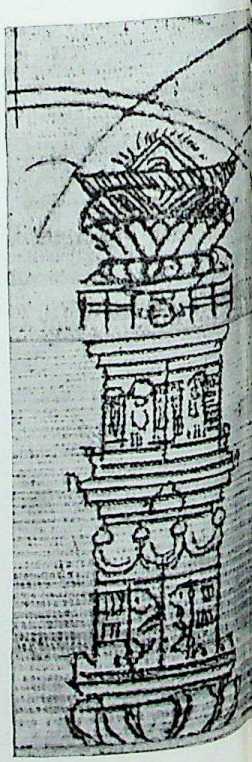

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CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

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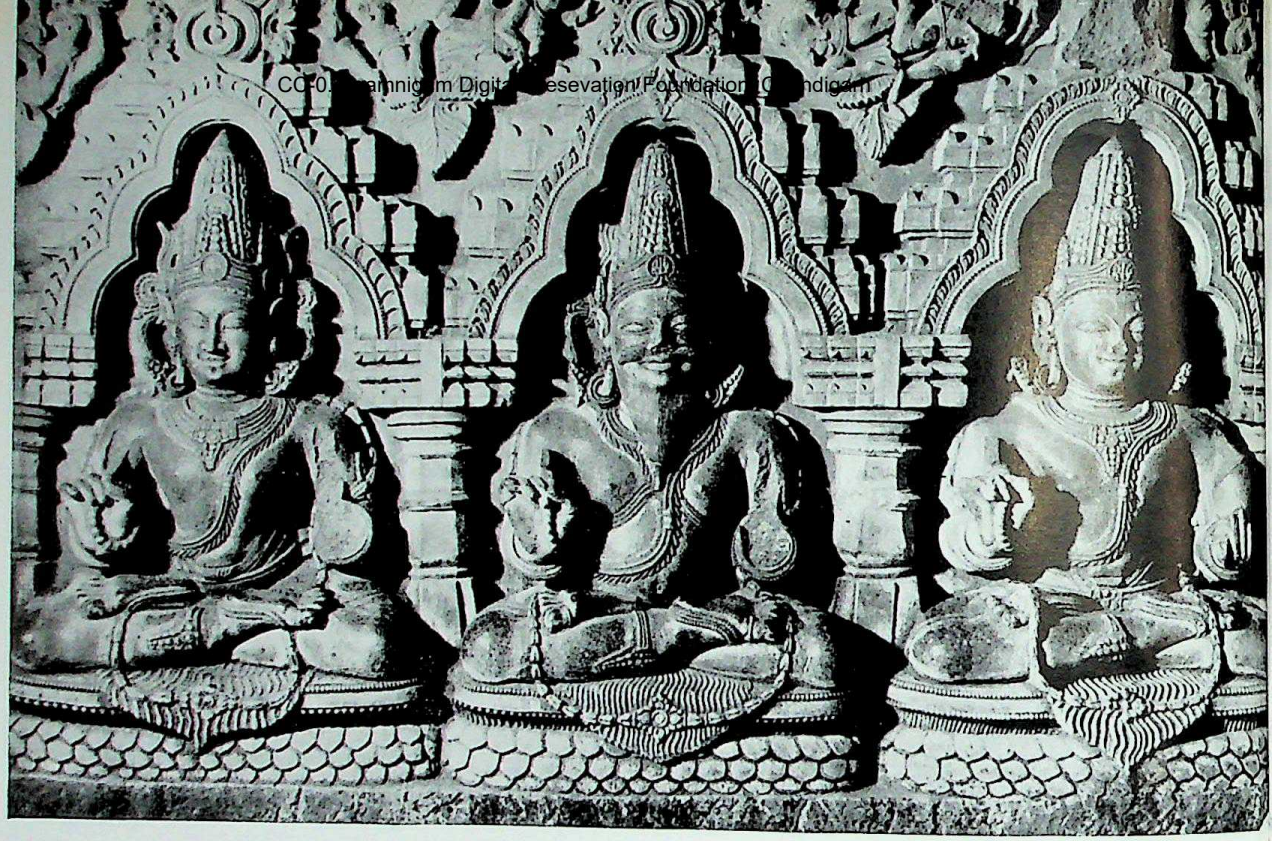
CC-0. Cunningham Digital Preservation Foundation. Chandigarh



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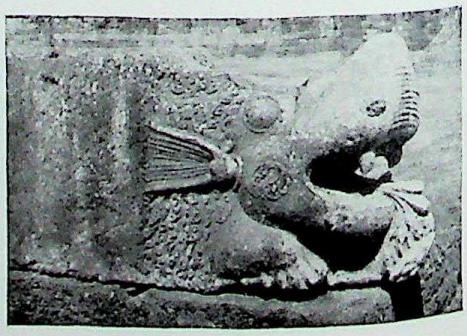

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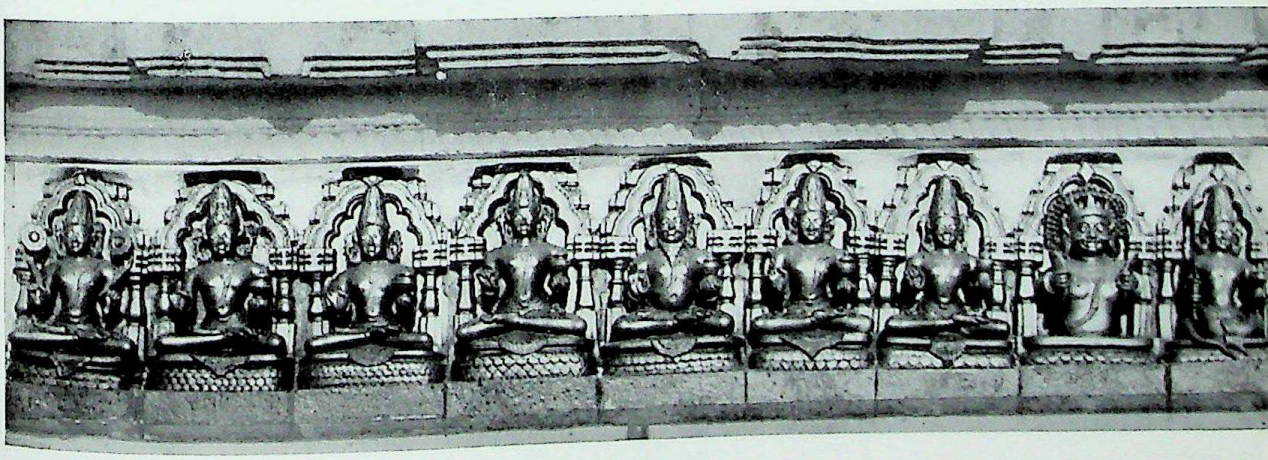

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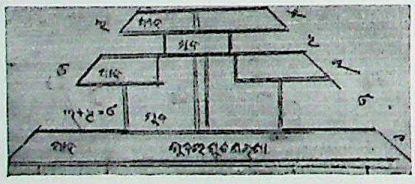

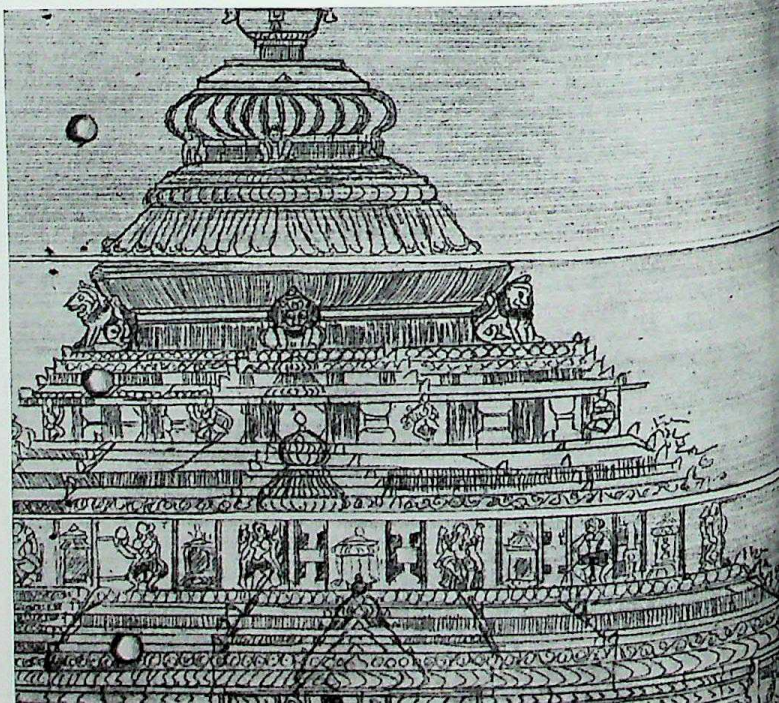

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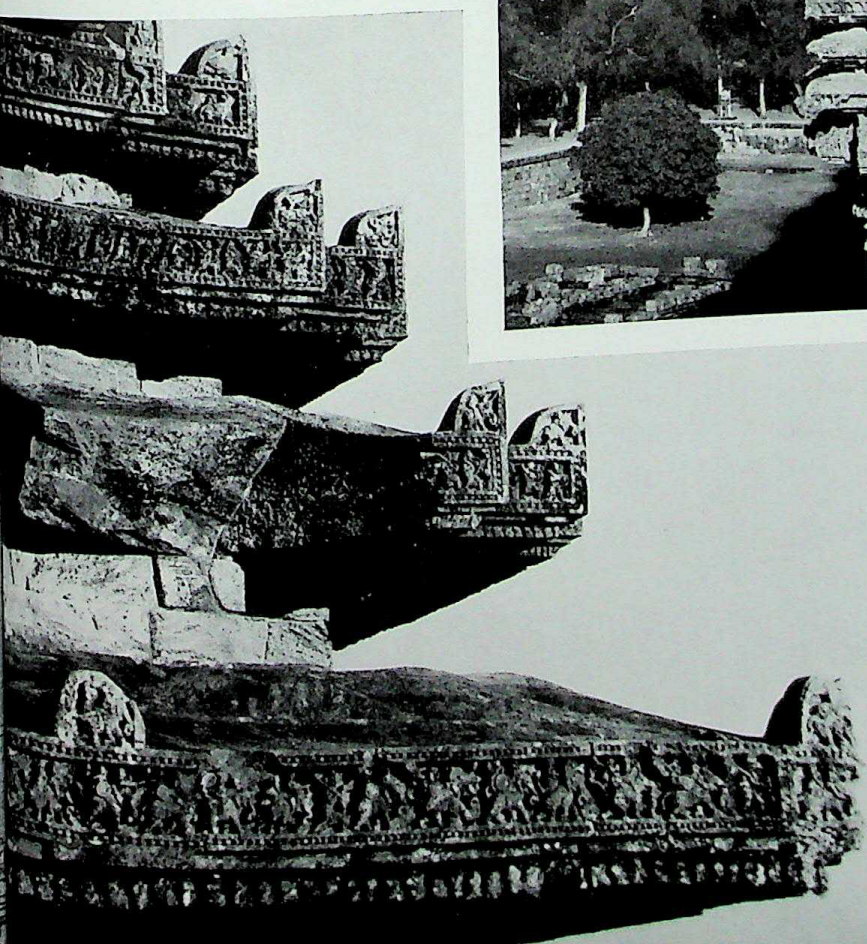

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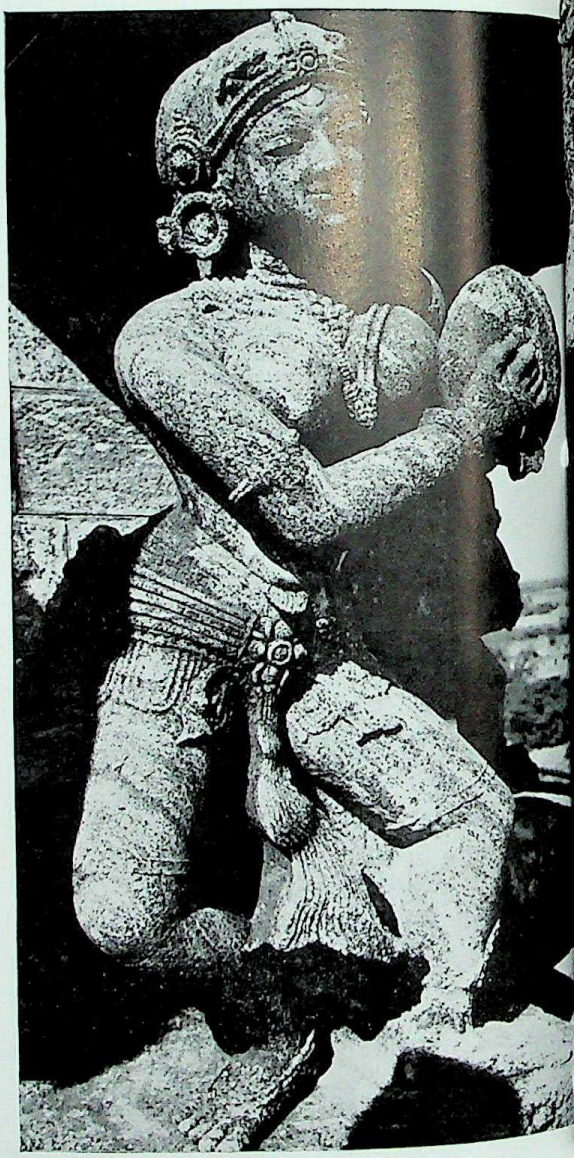

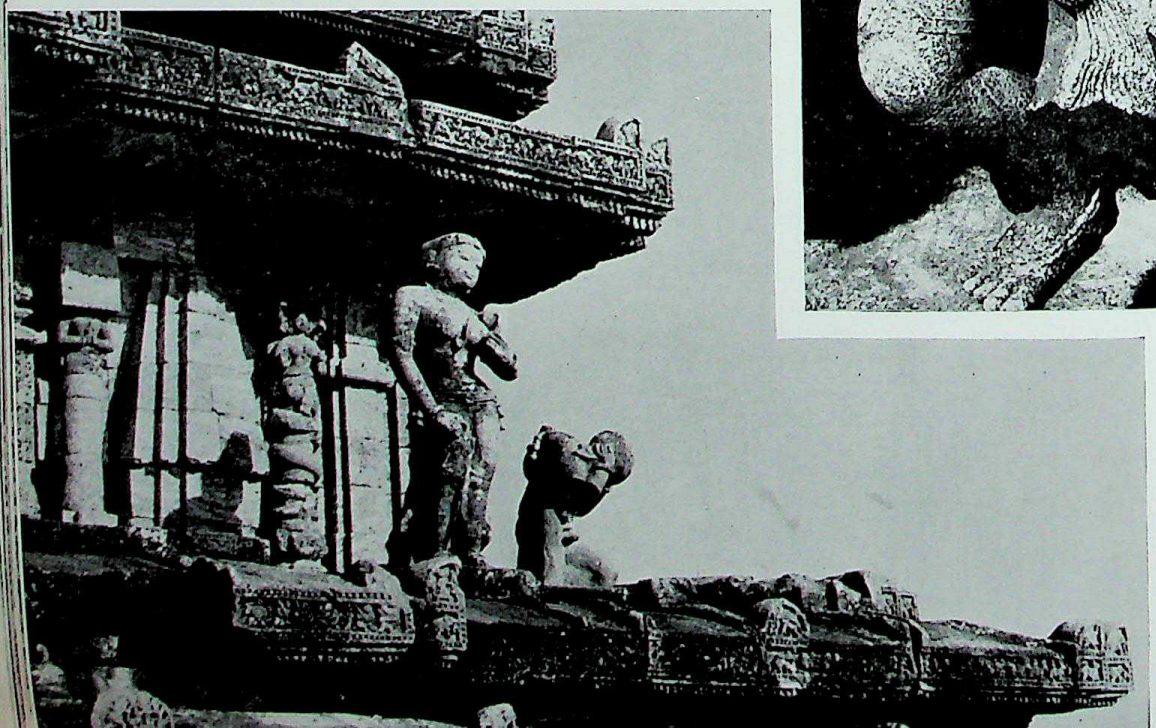

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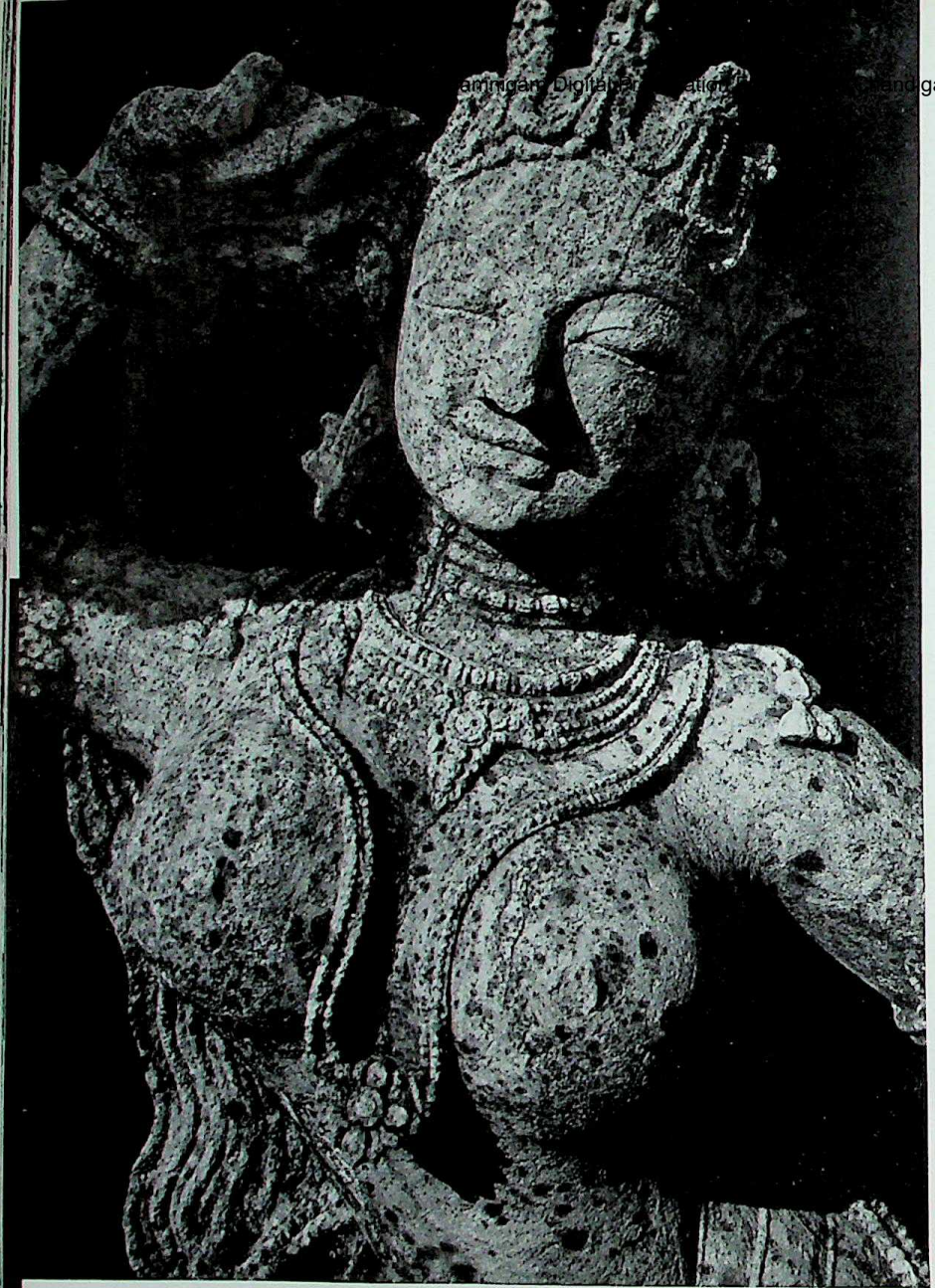

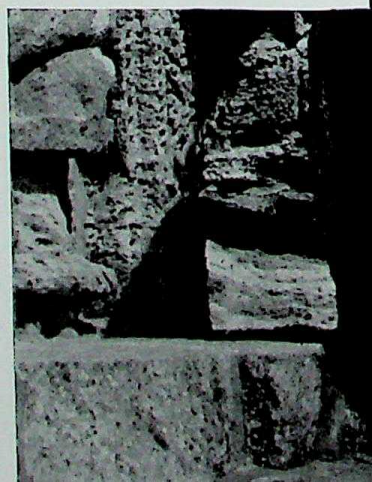

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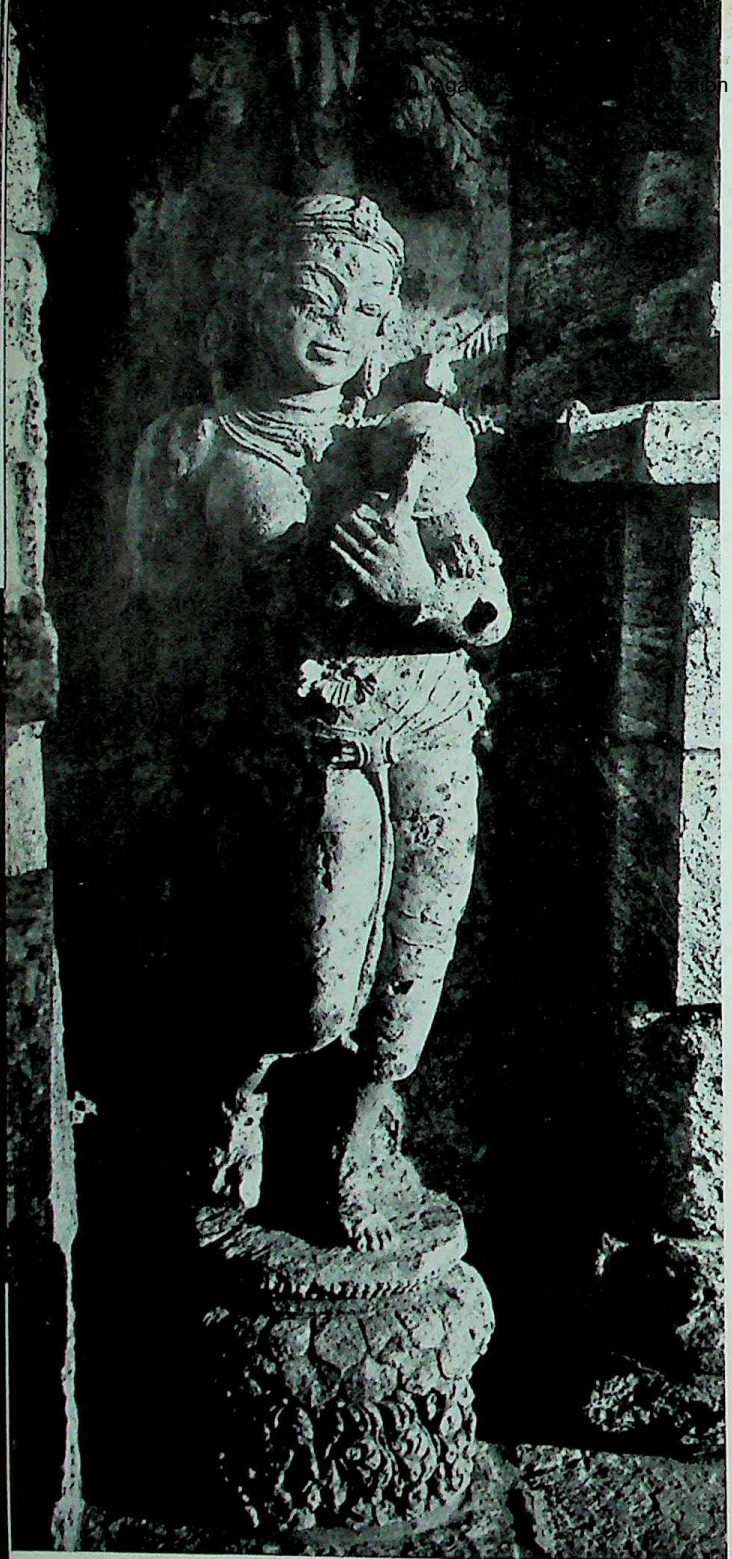

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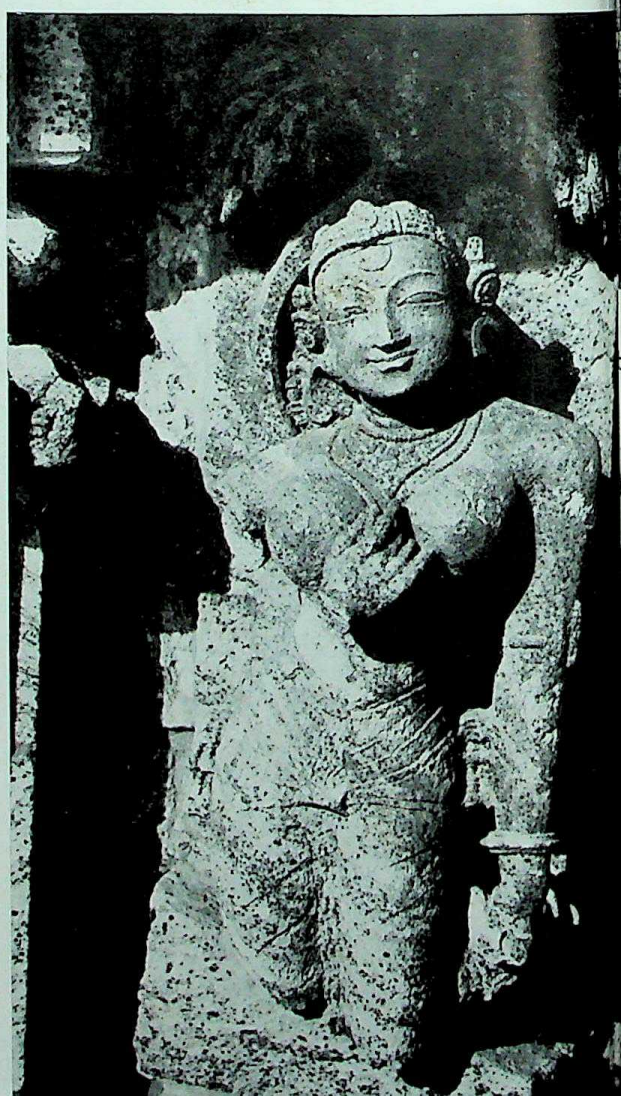

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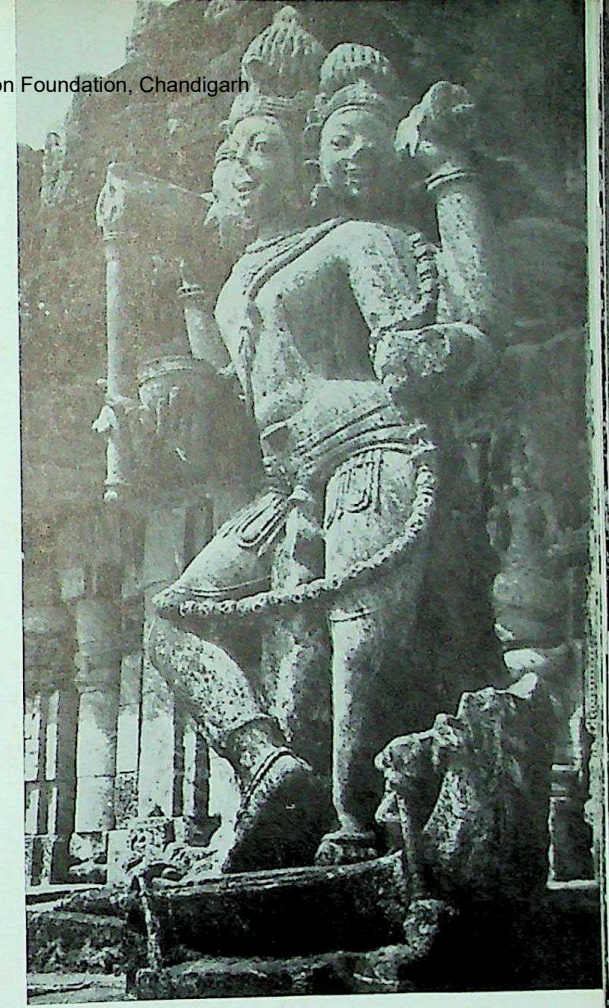

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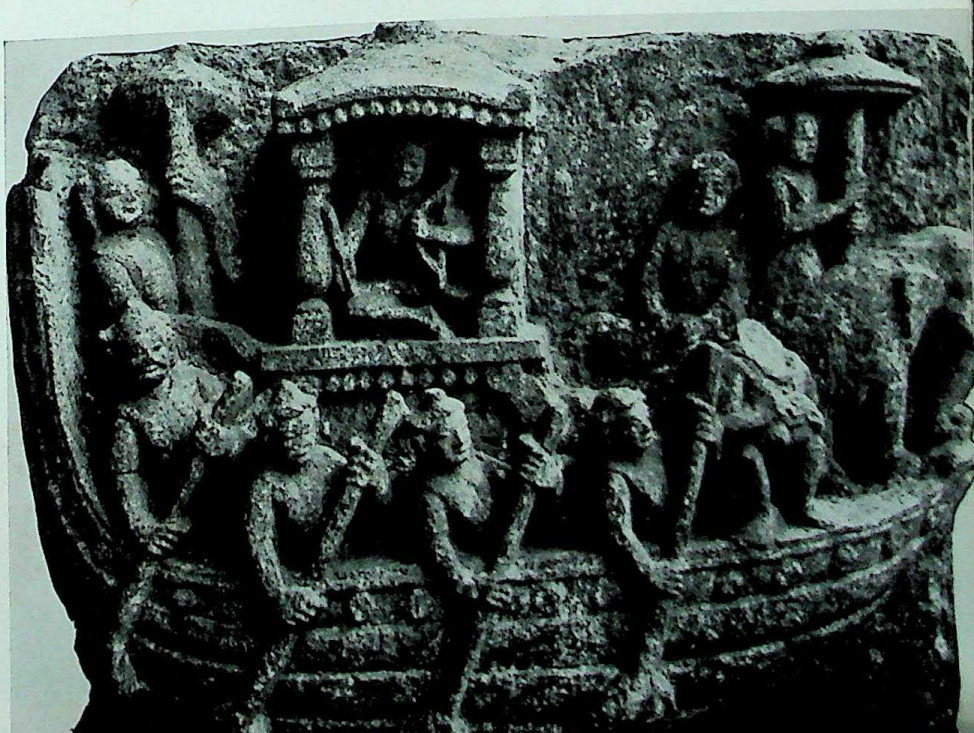

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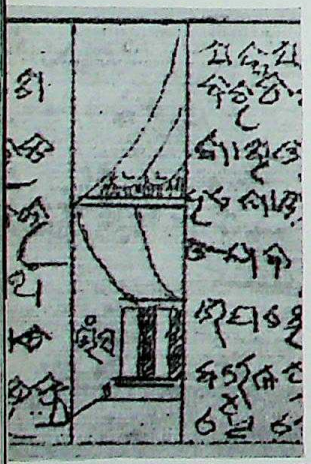

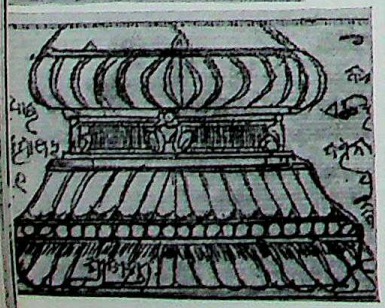

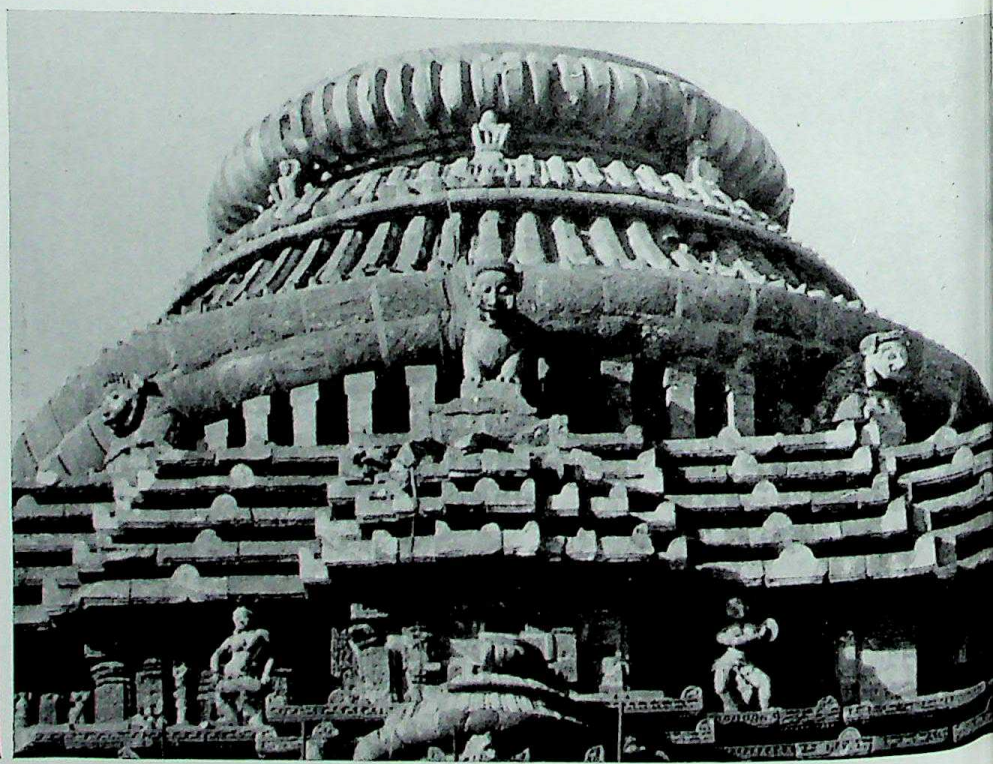

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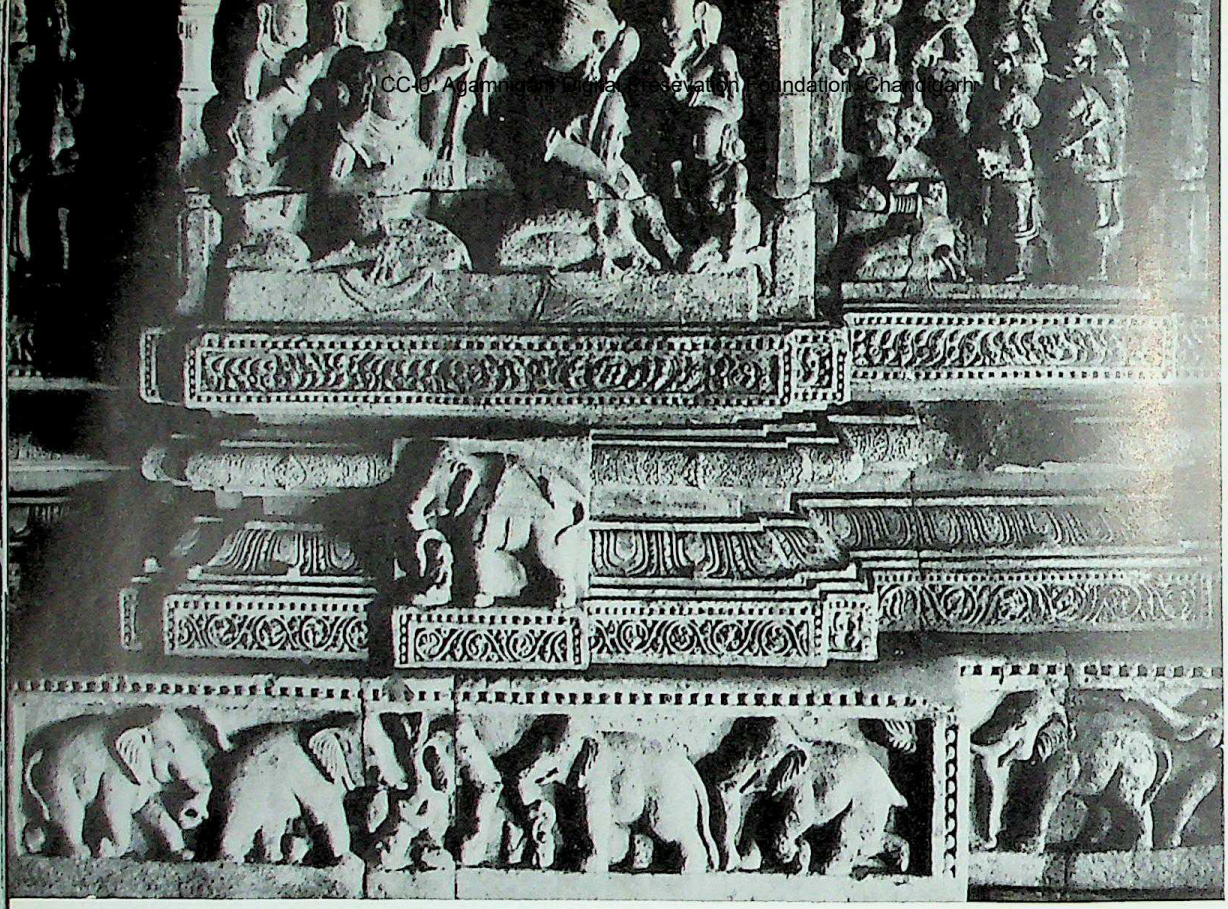

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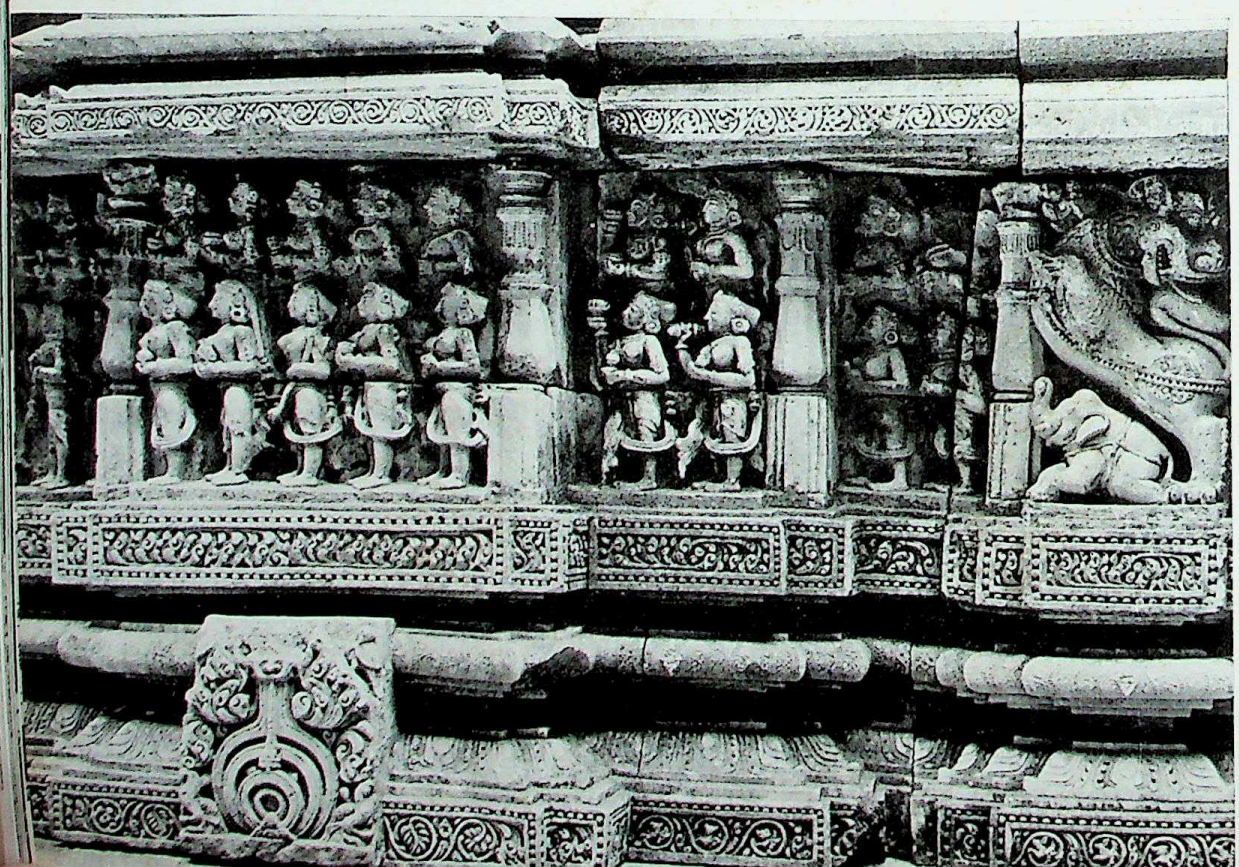

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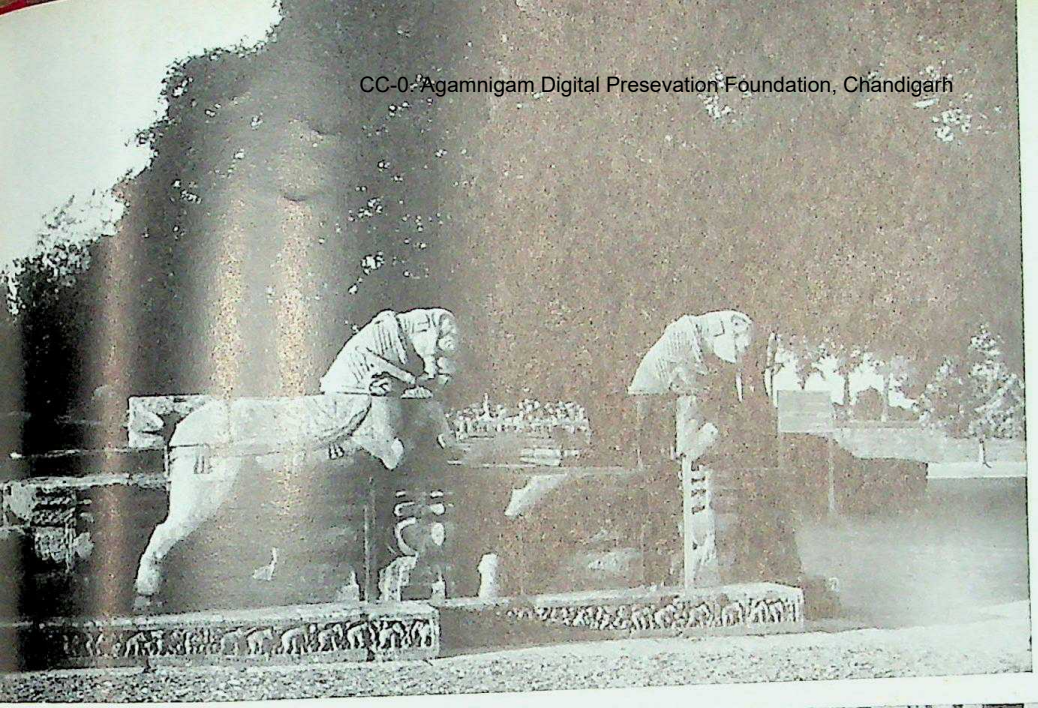

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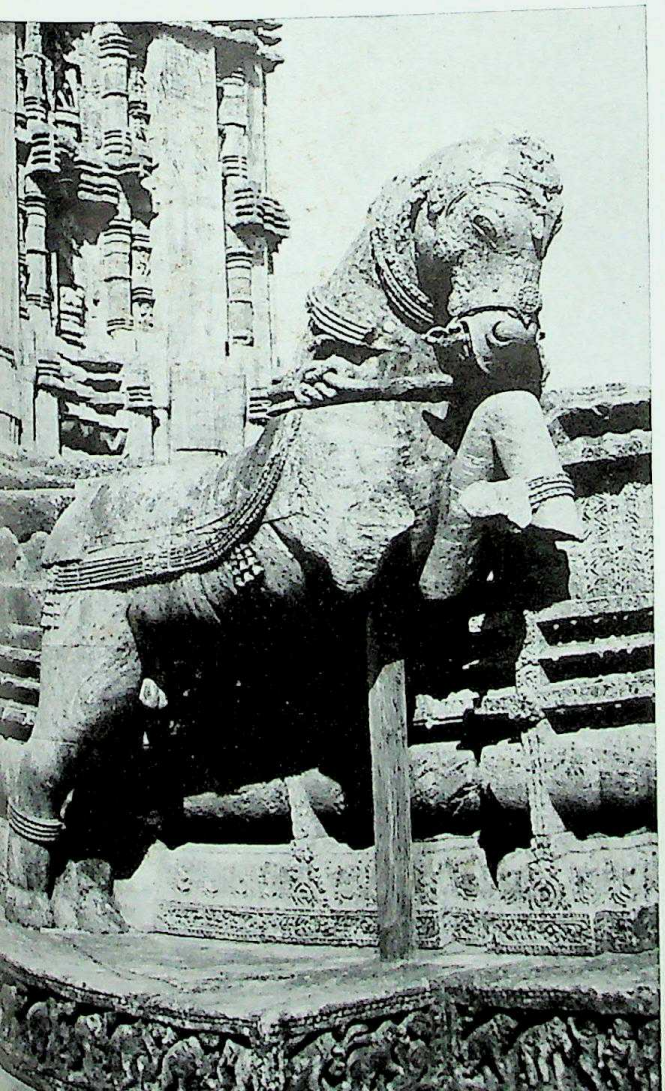

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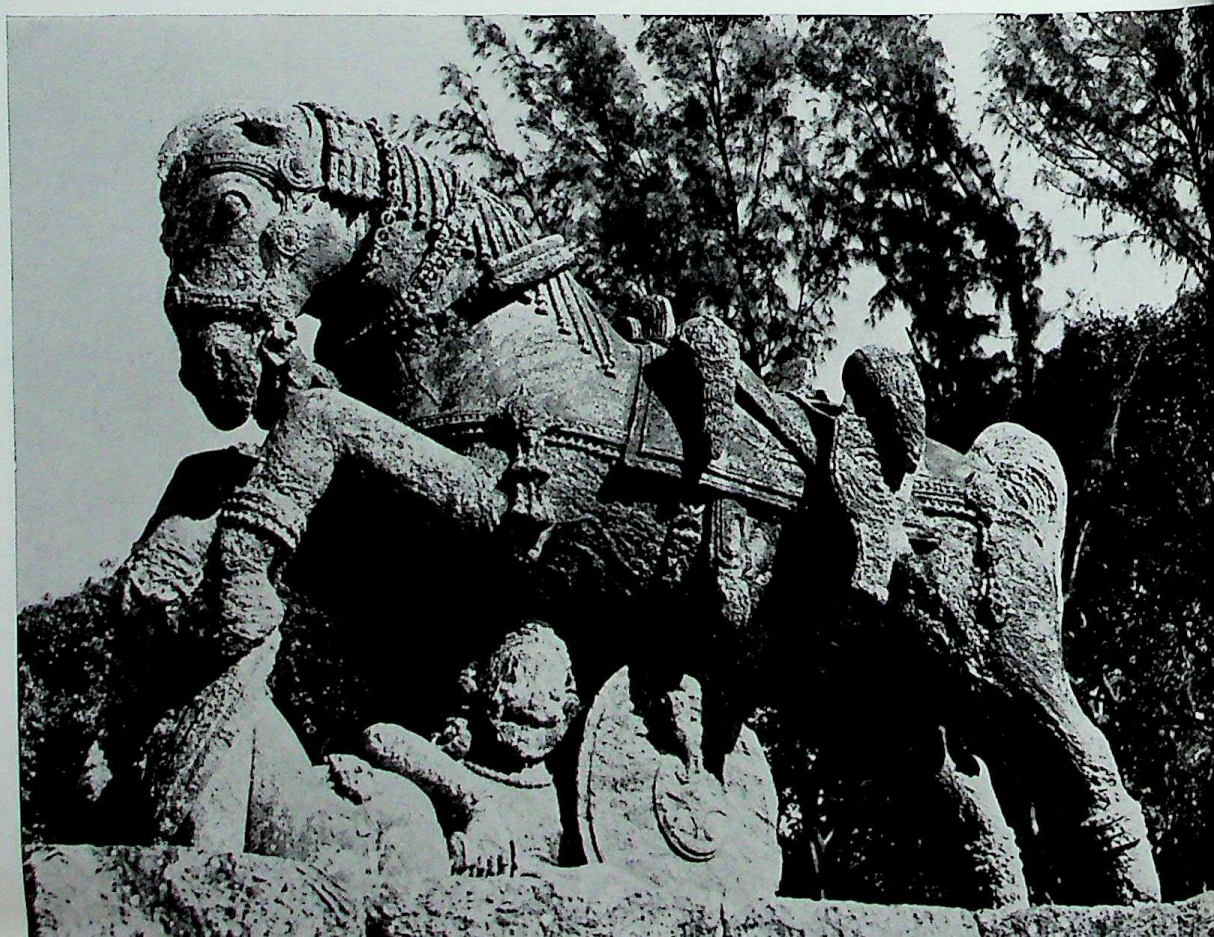

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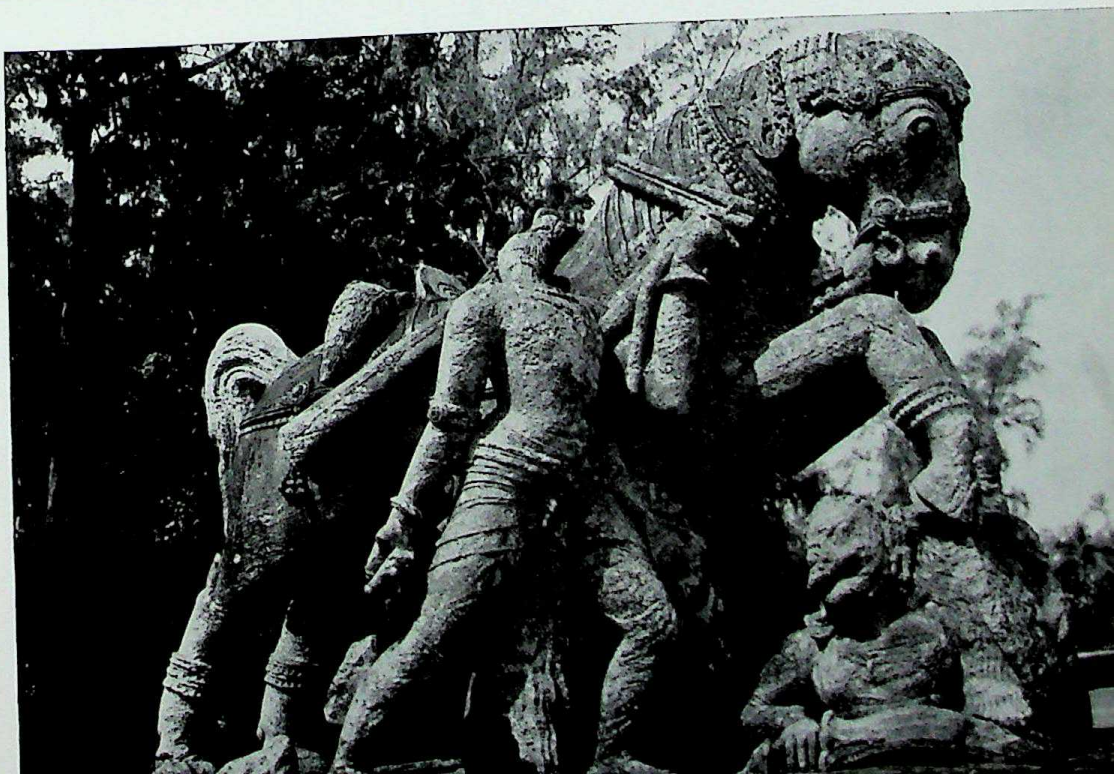

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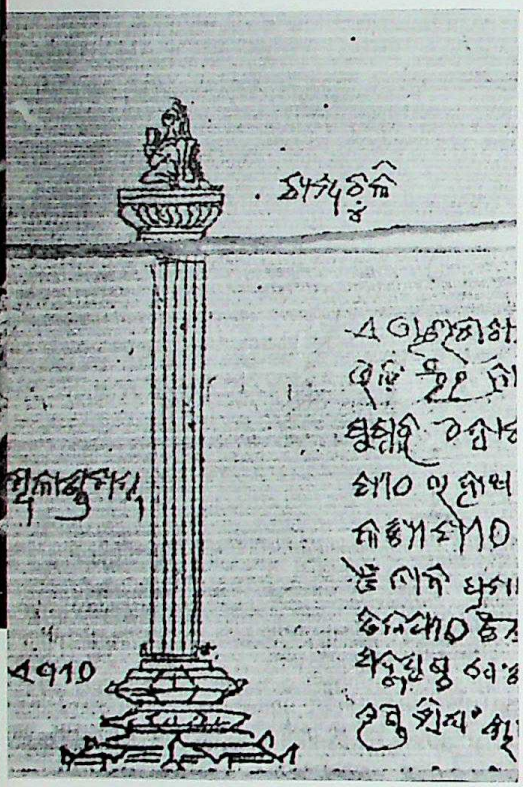

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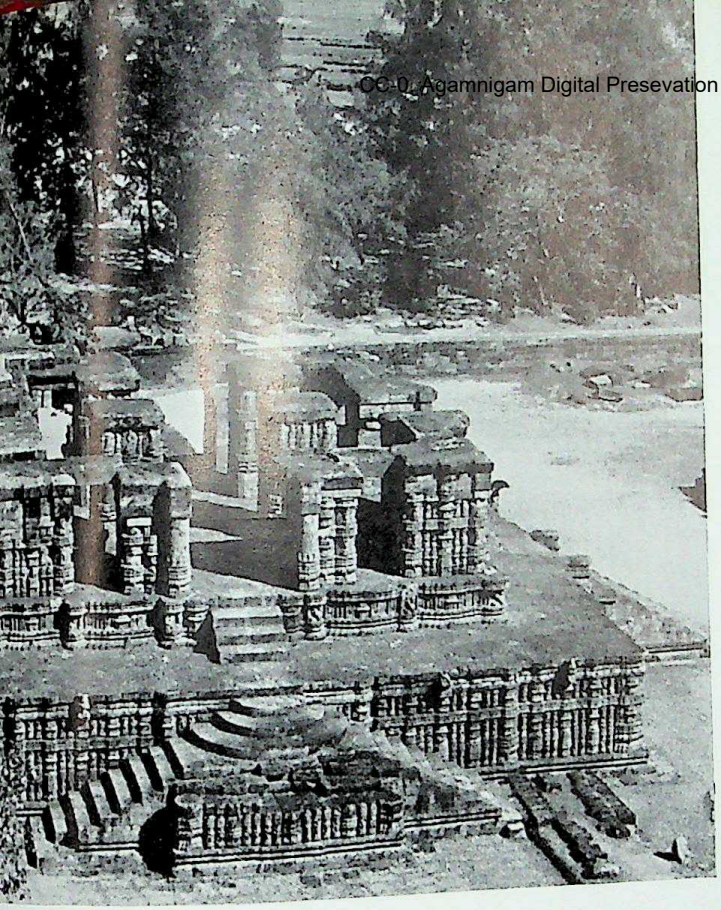

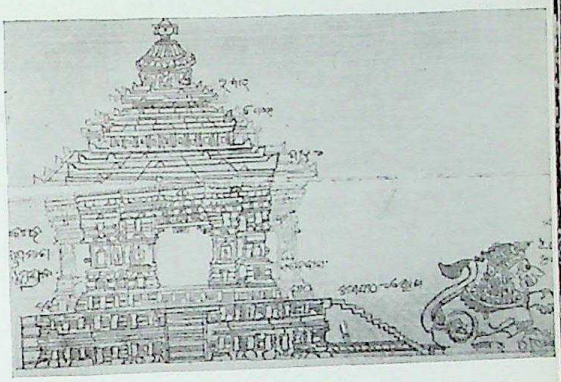

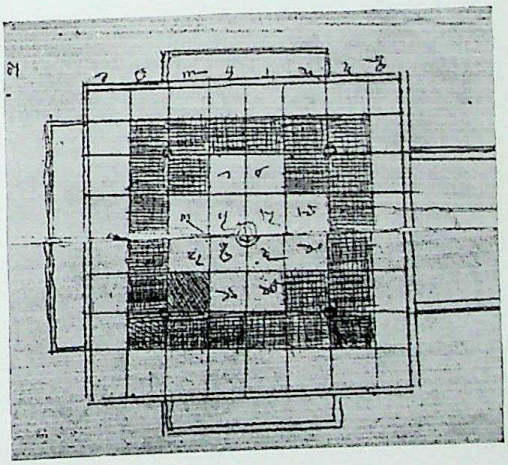

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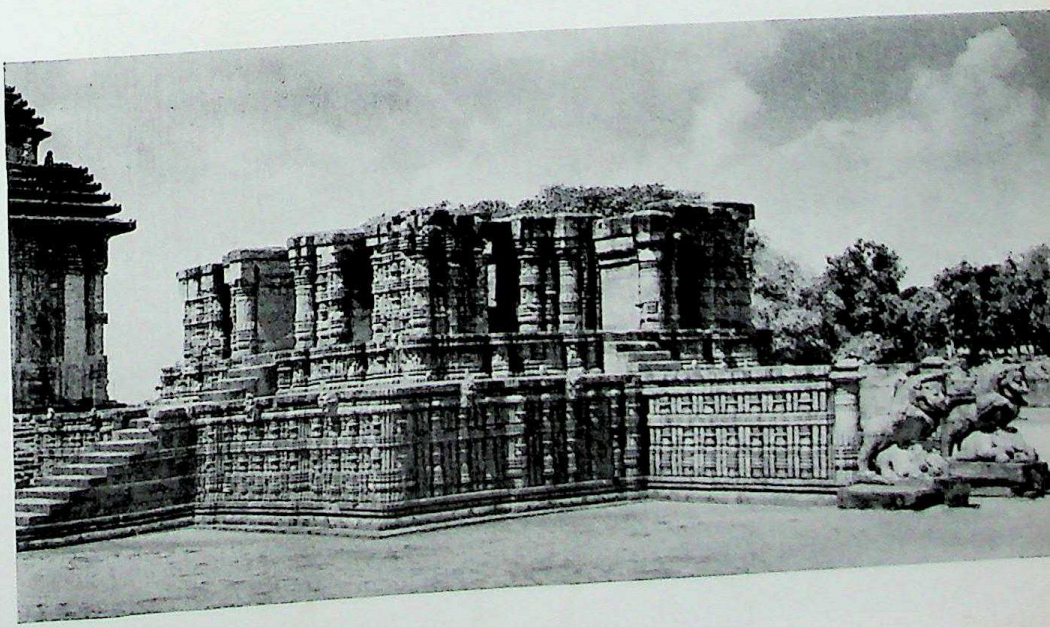

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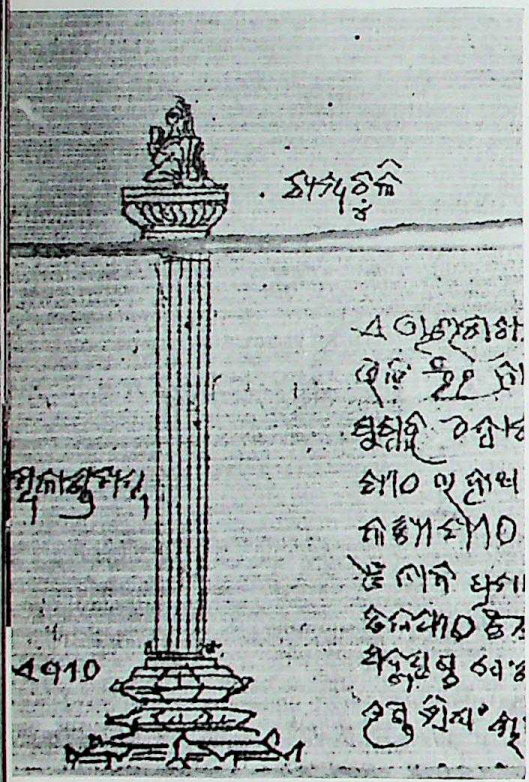

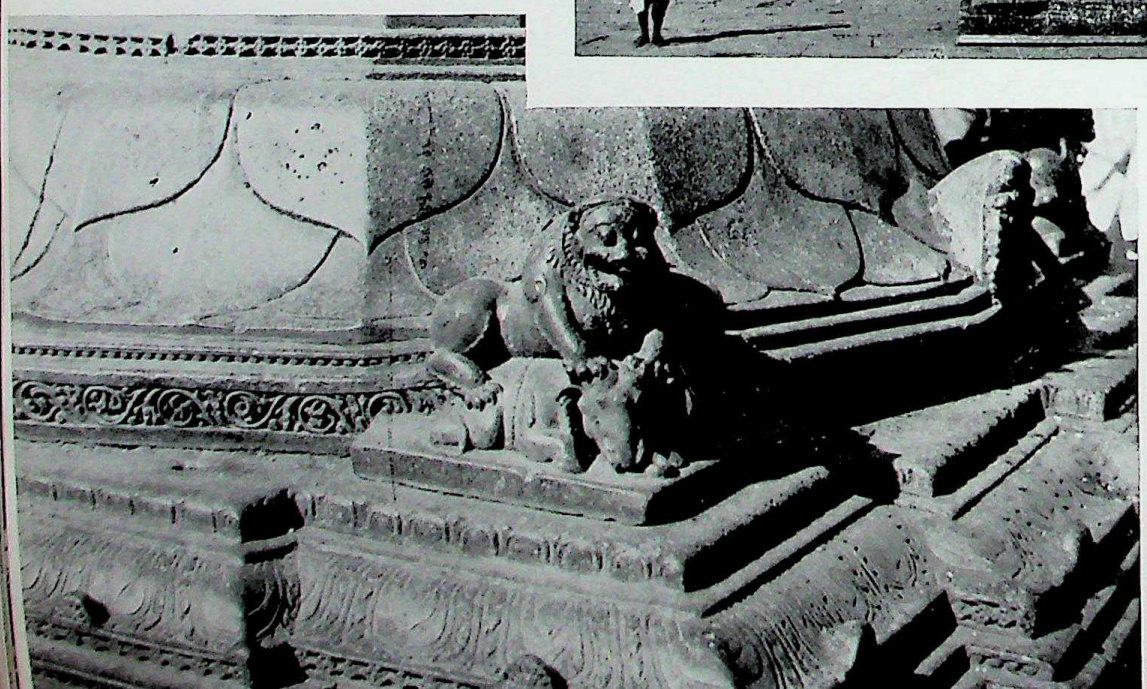

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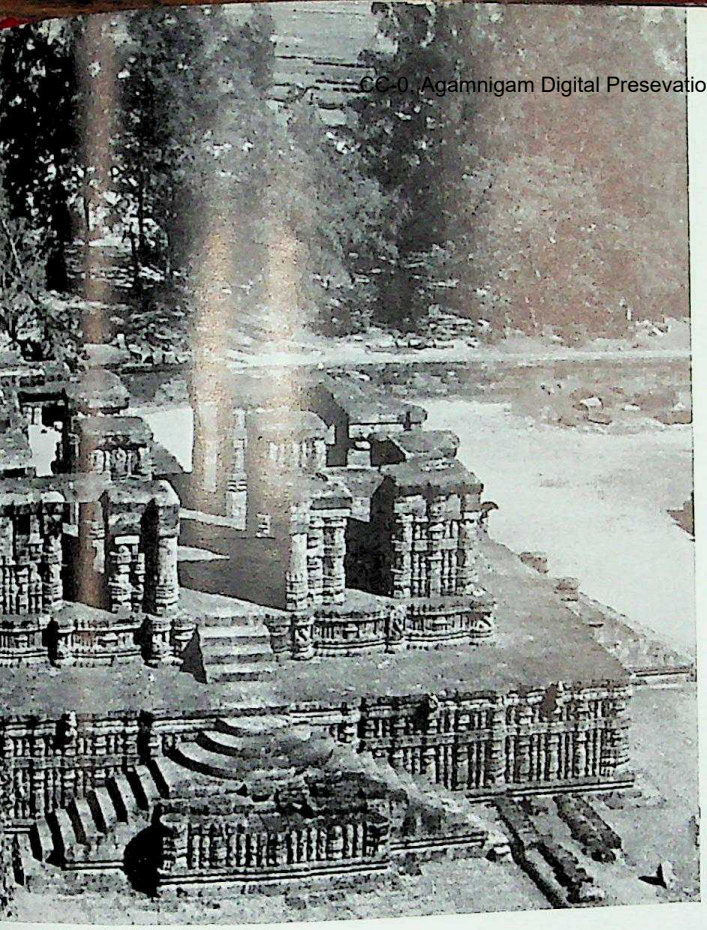

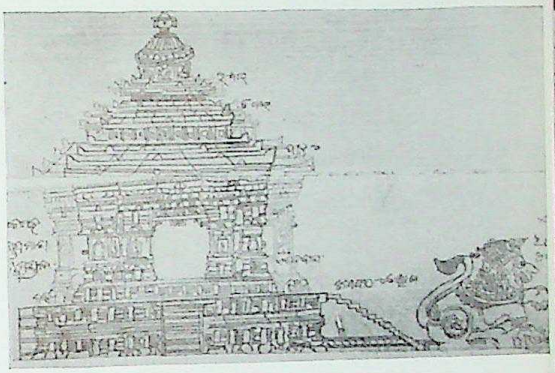

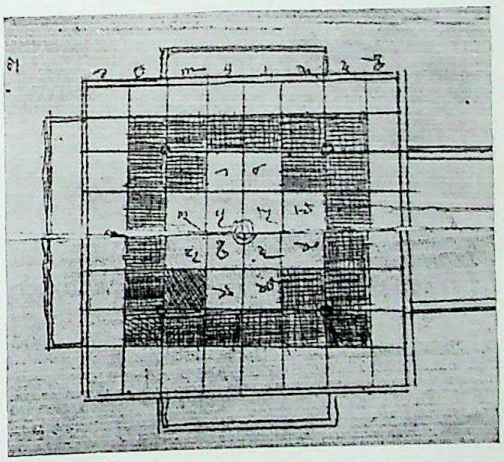

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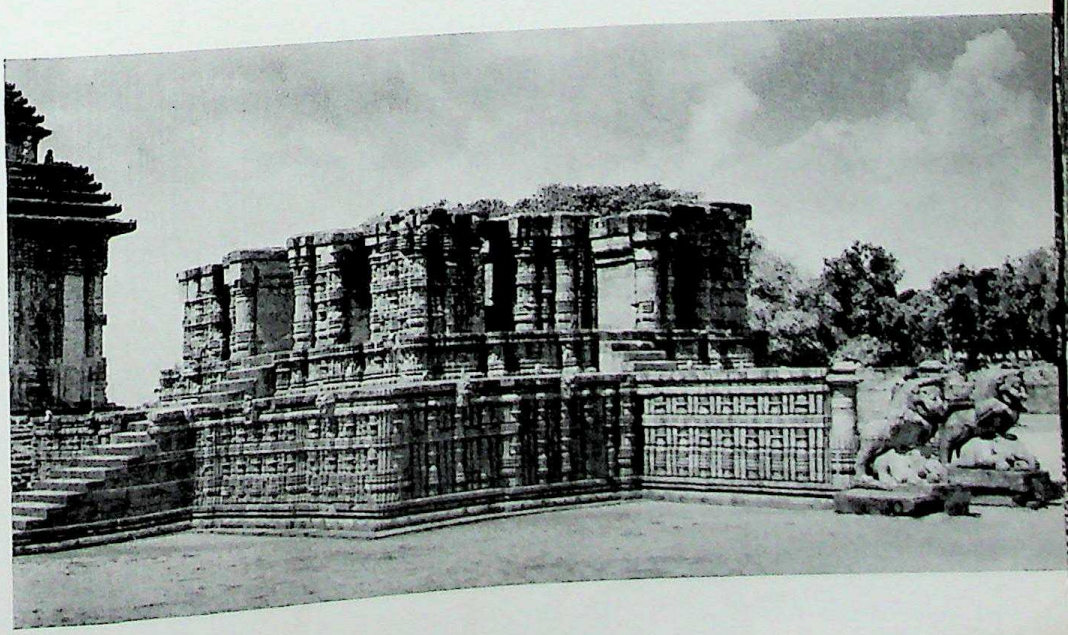

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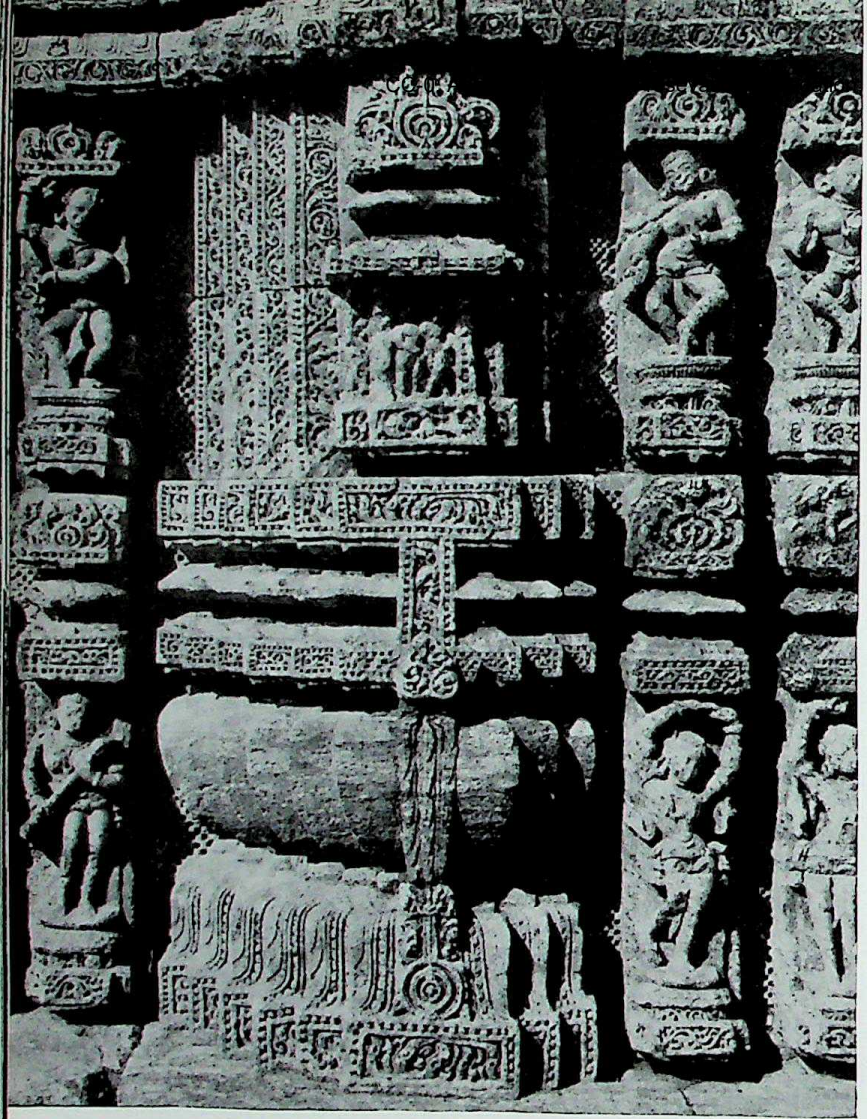

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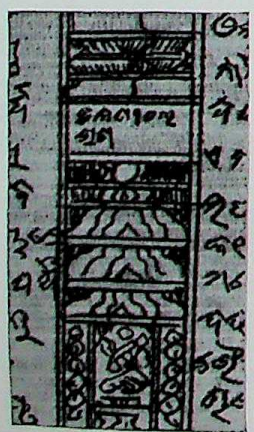

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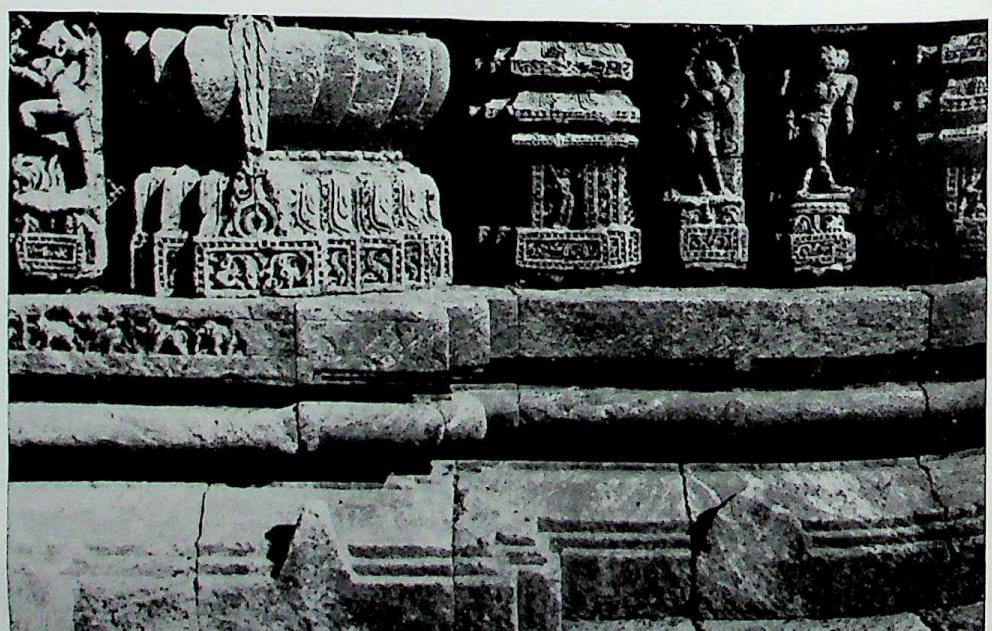

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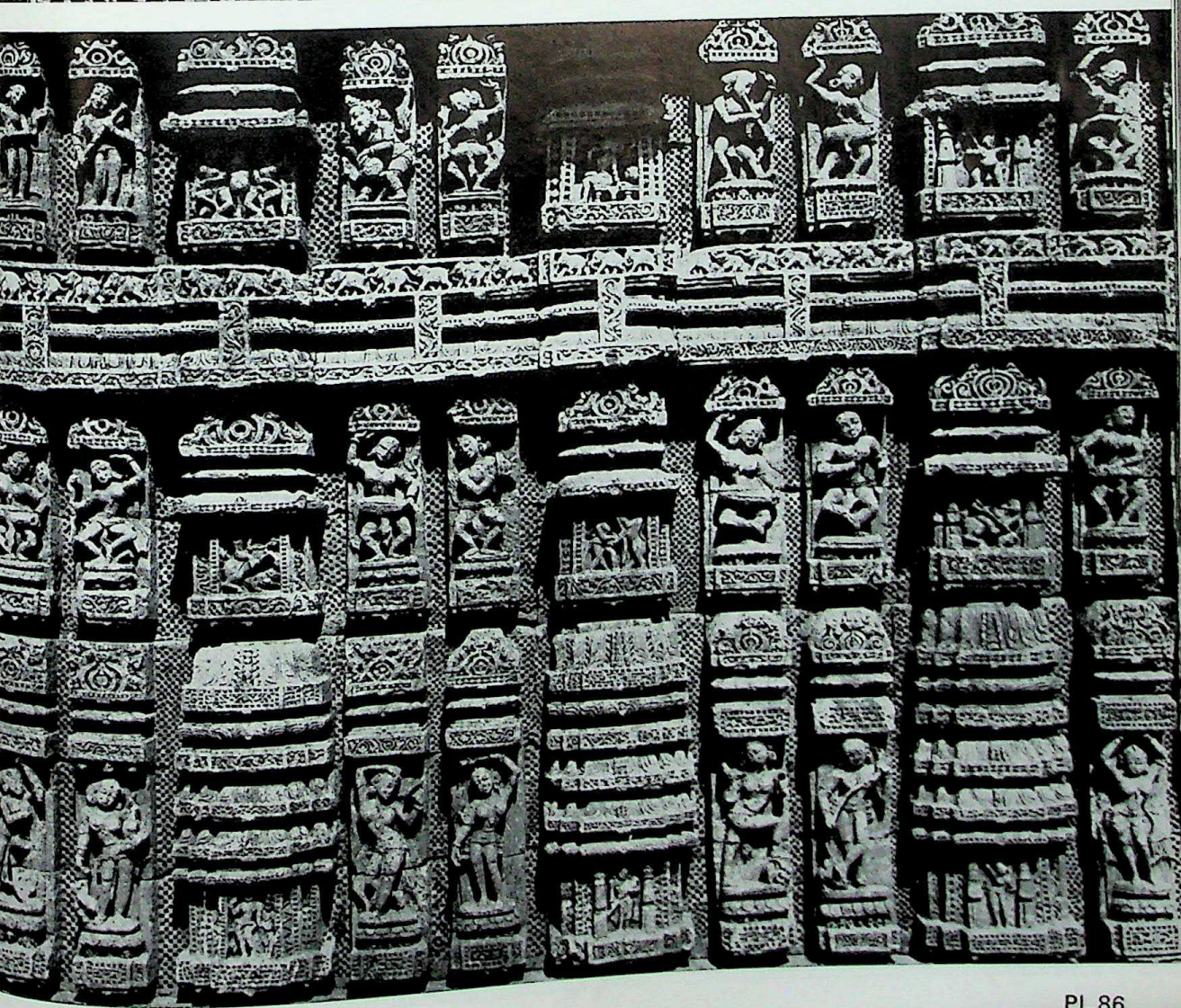

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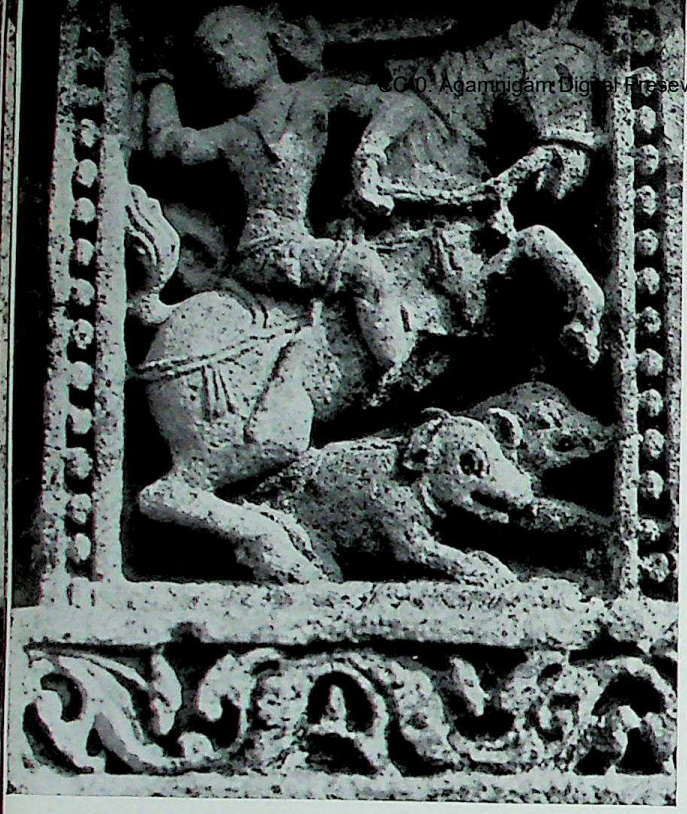

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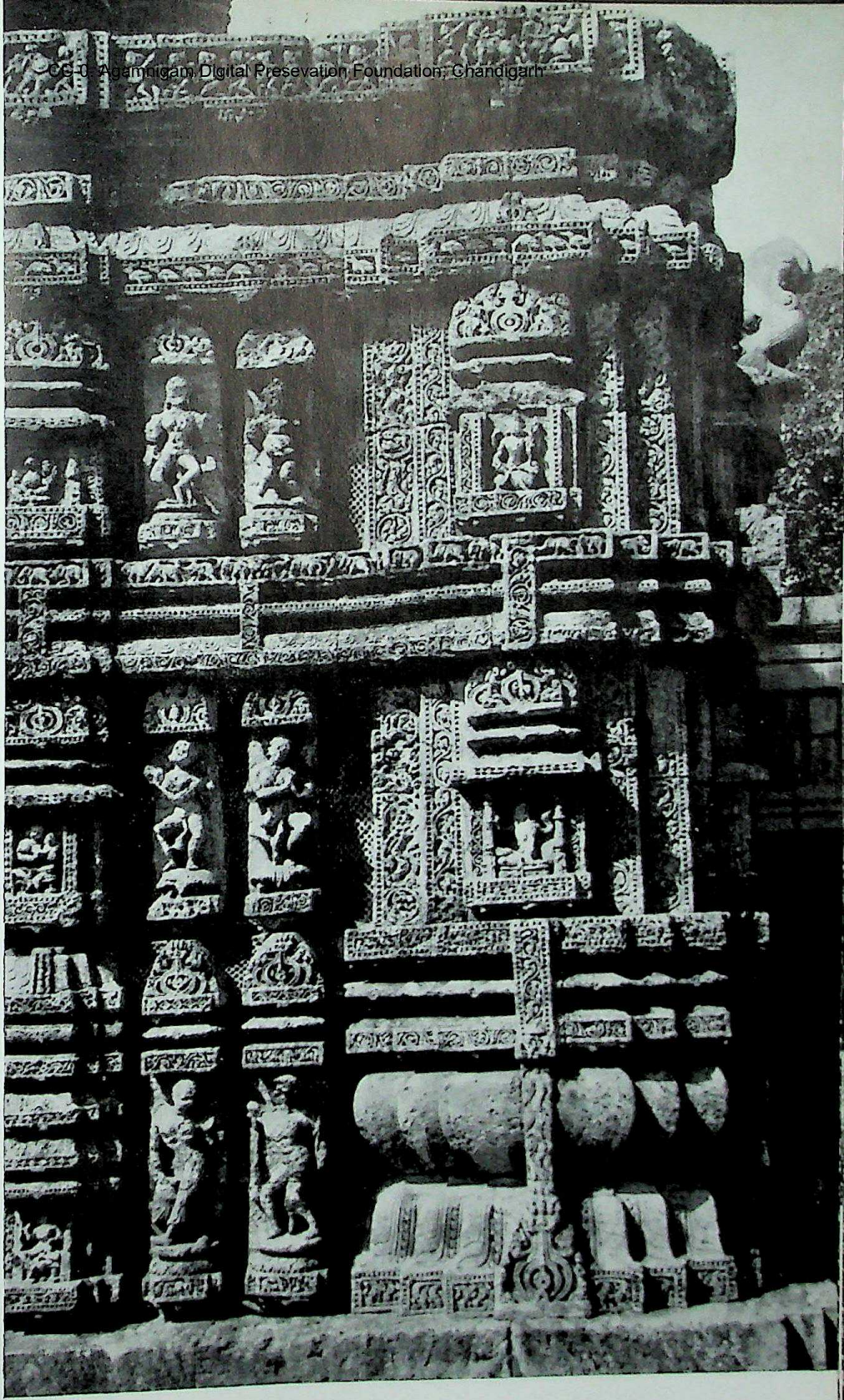

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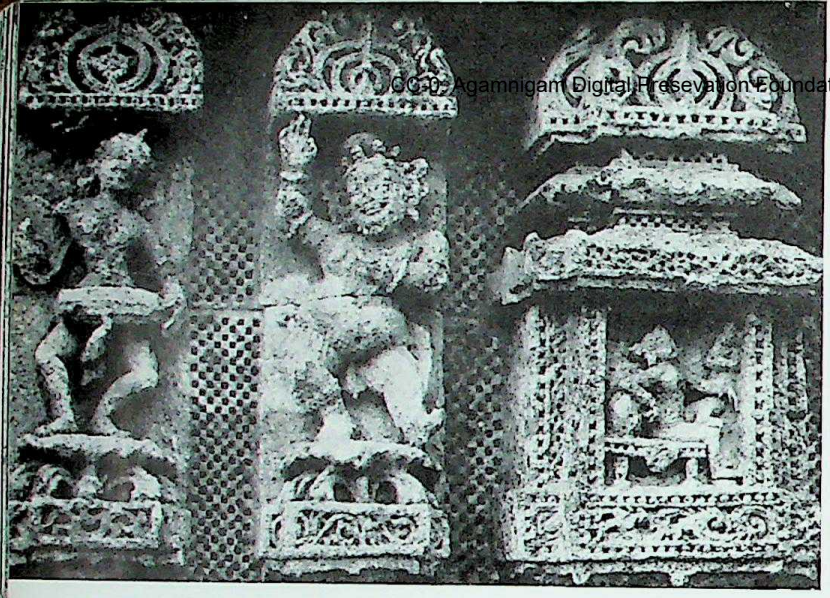

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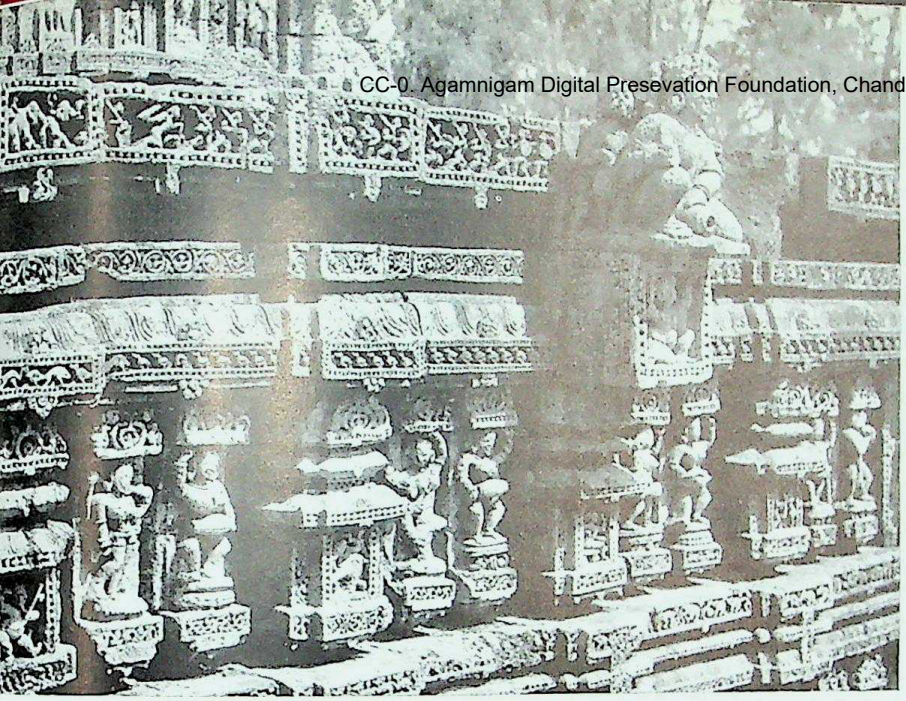

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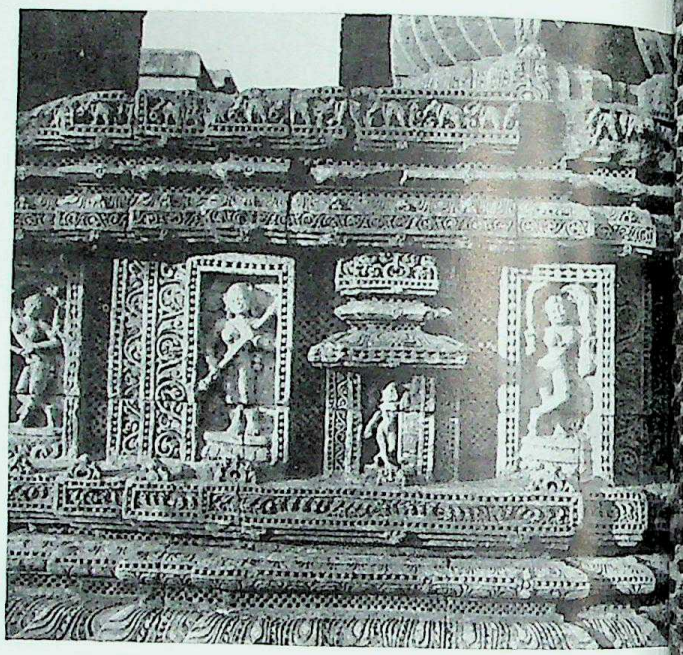

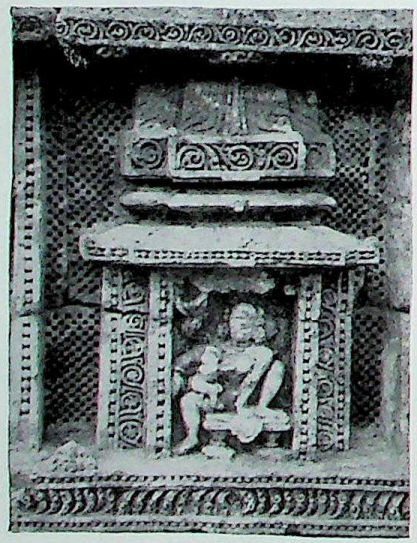

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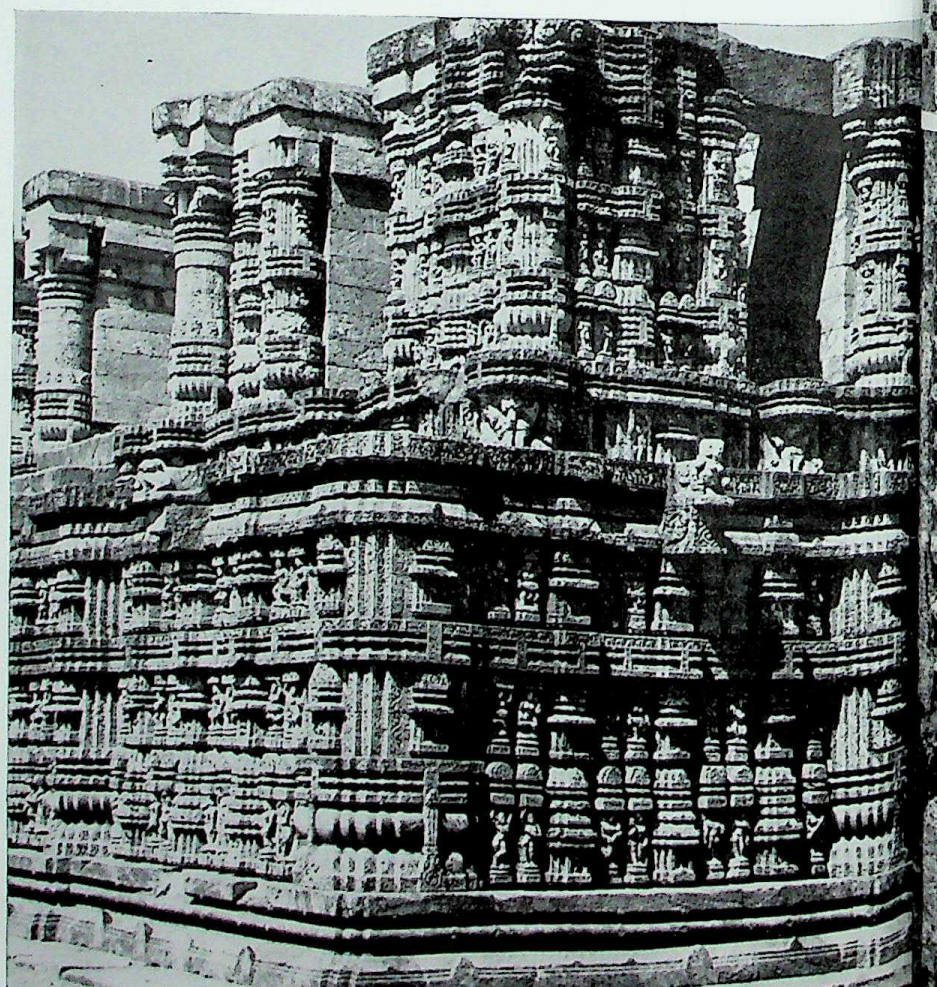

PL.91

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CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

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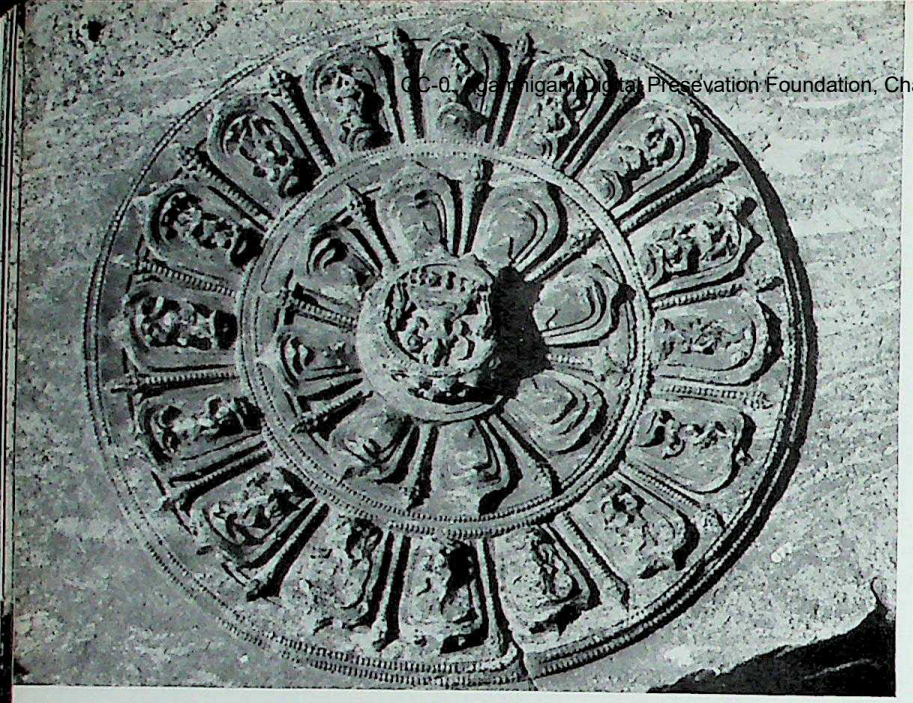
CC-0. Panjab Digital Preservation Foundation, Chandigarh



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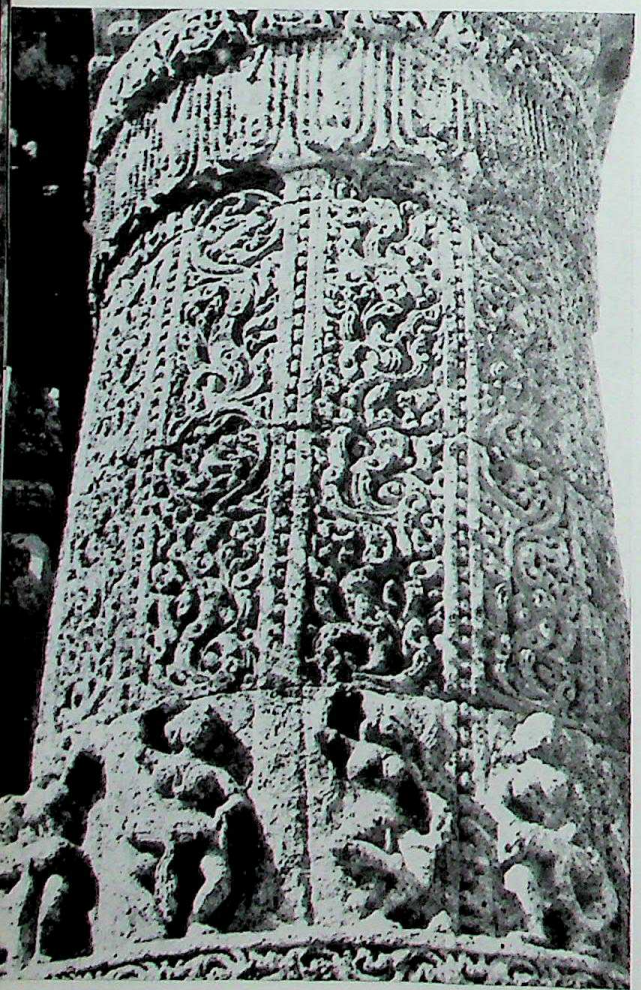

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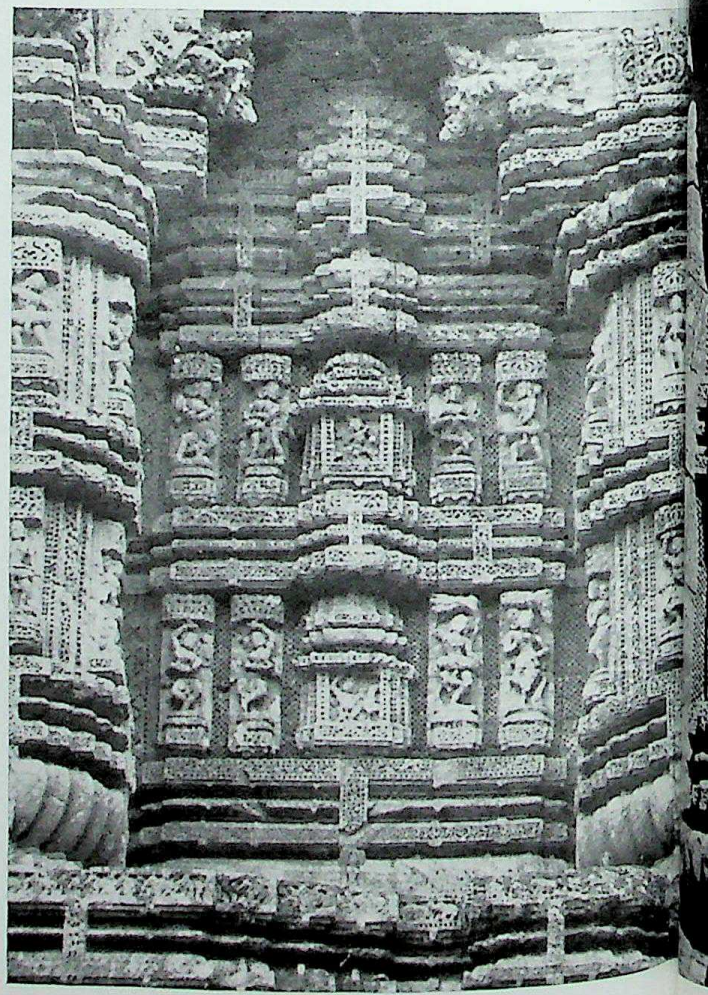

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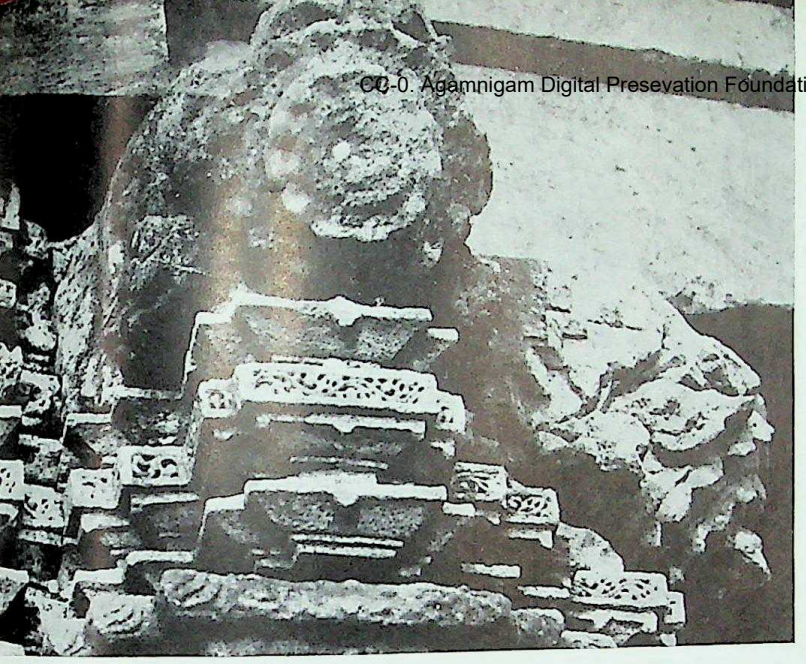
PL.93

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh



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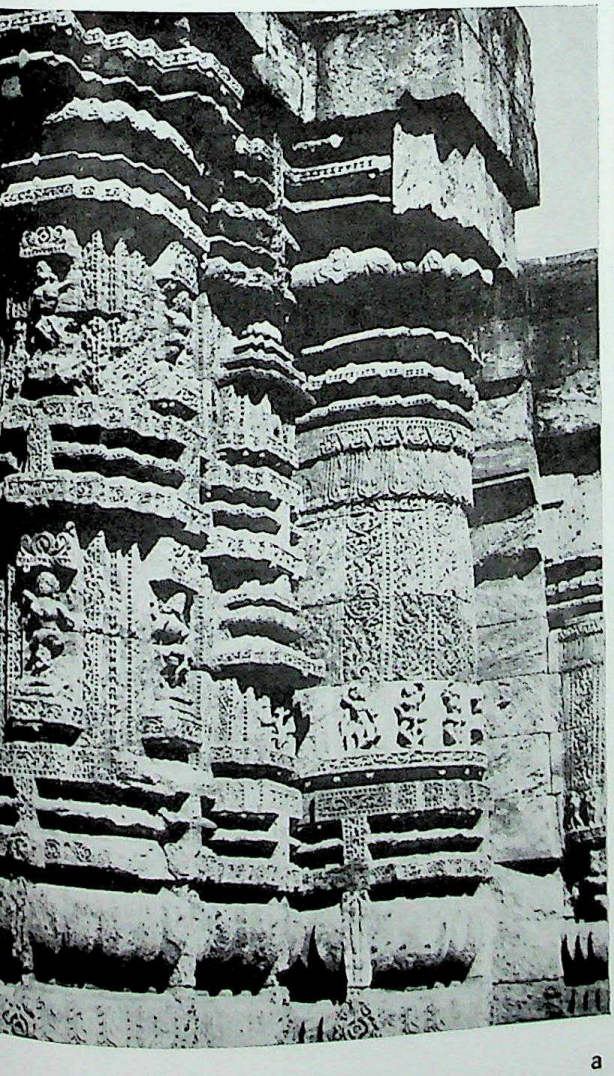

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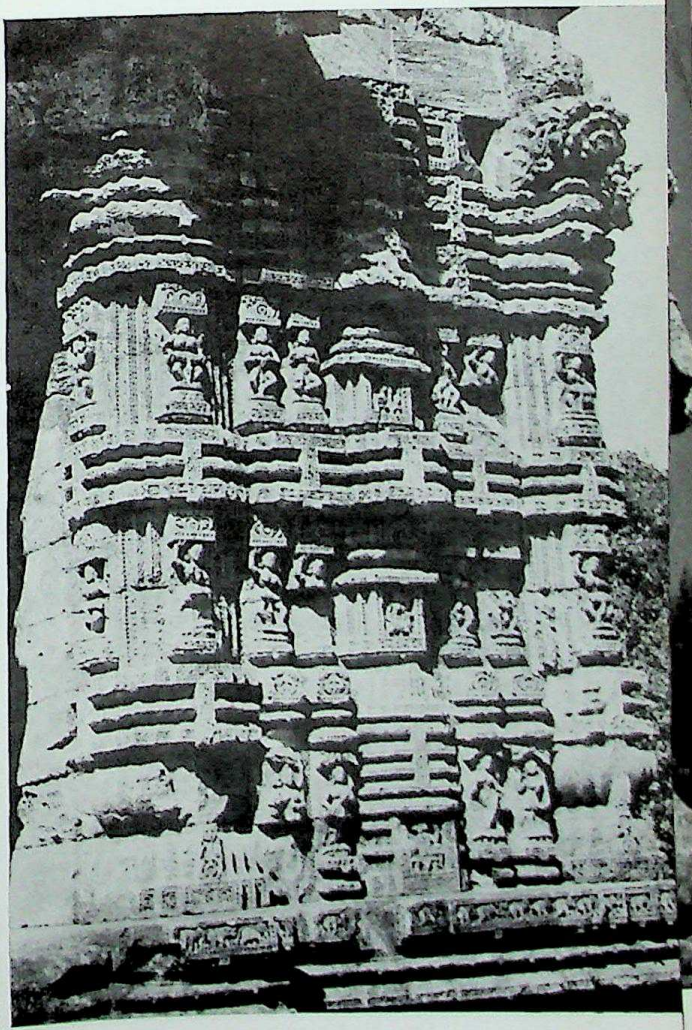

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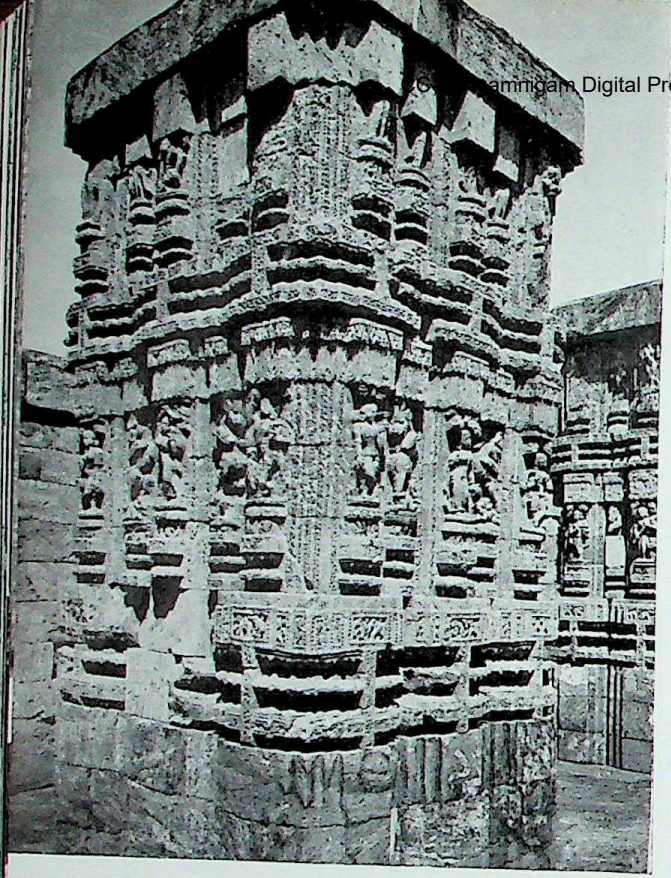

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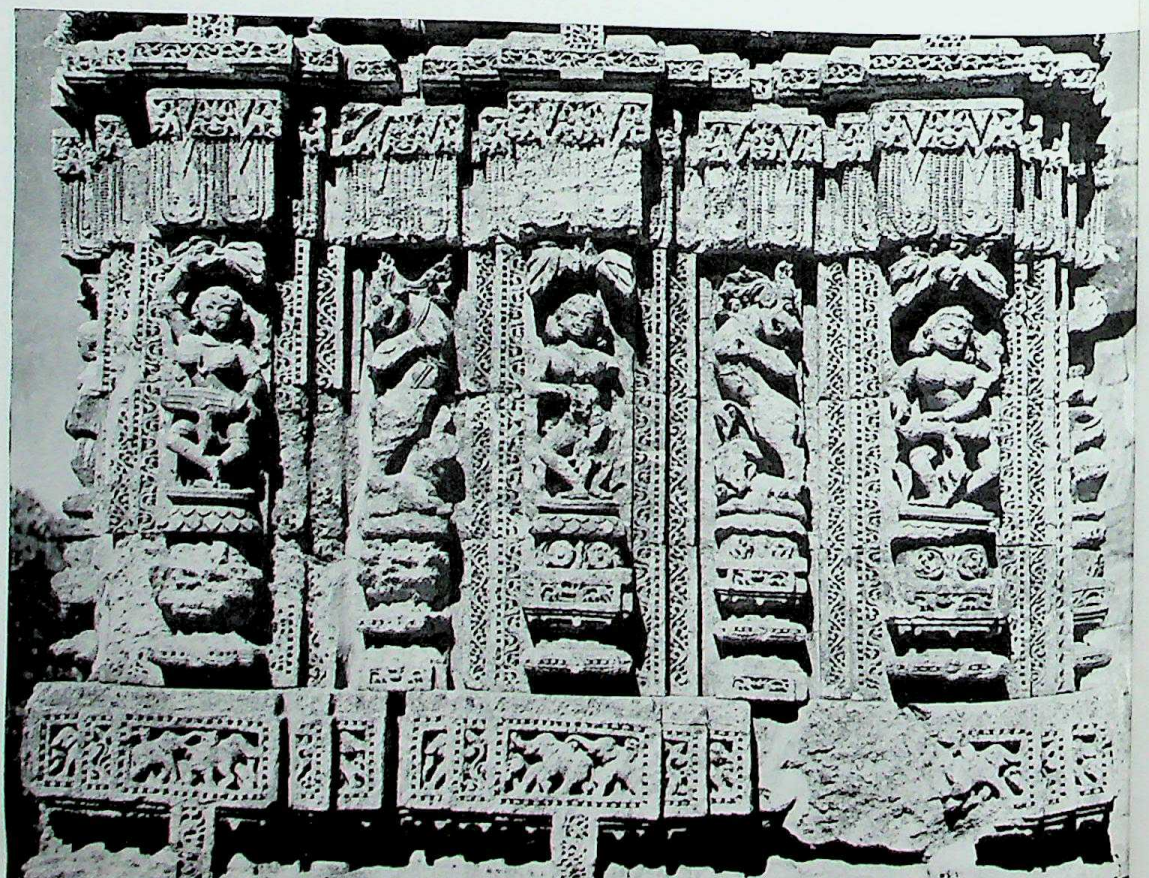

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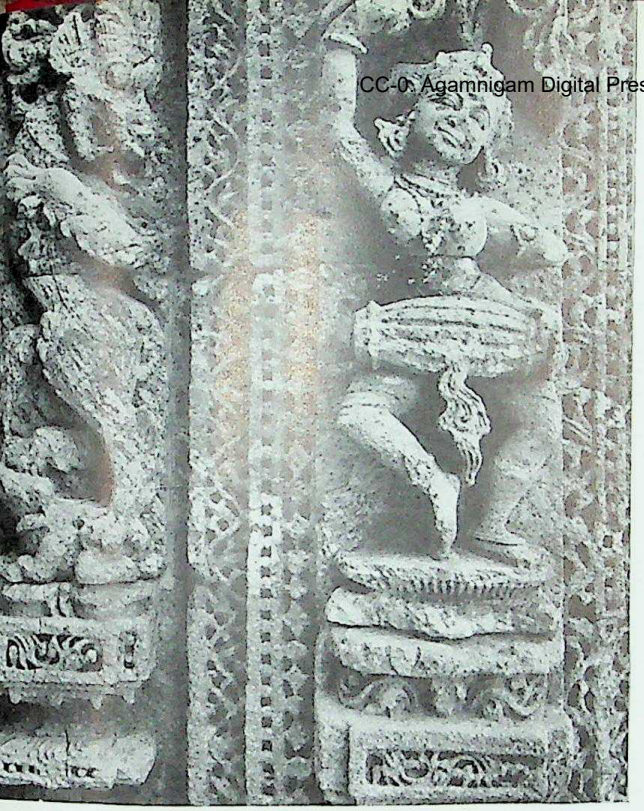

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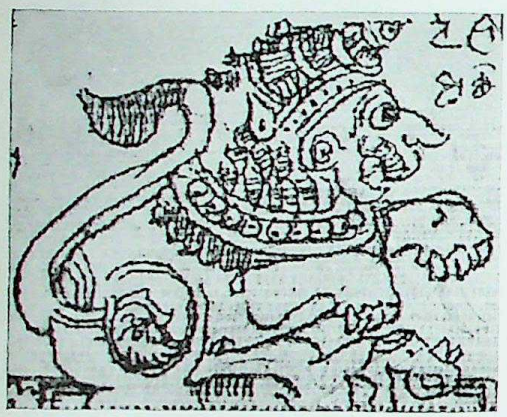
CC-0. Agamniga... Preservation Foundation...



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PL.97

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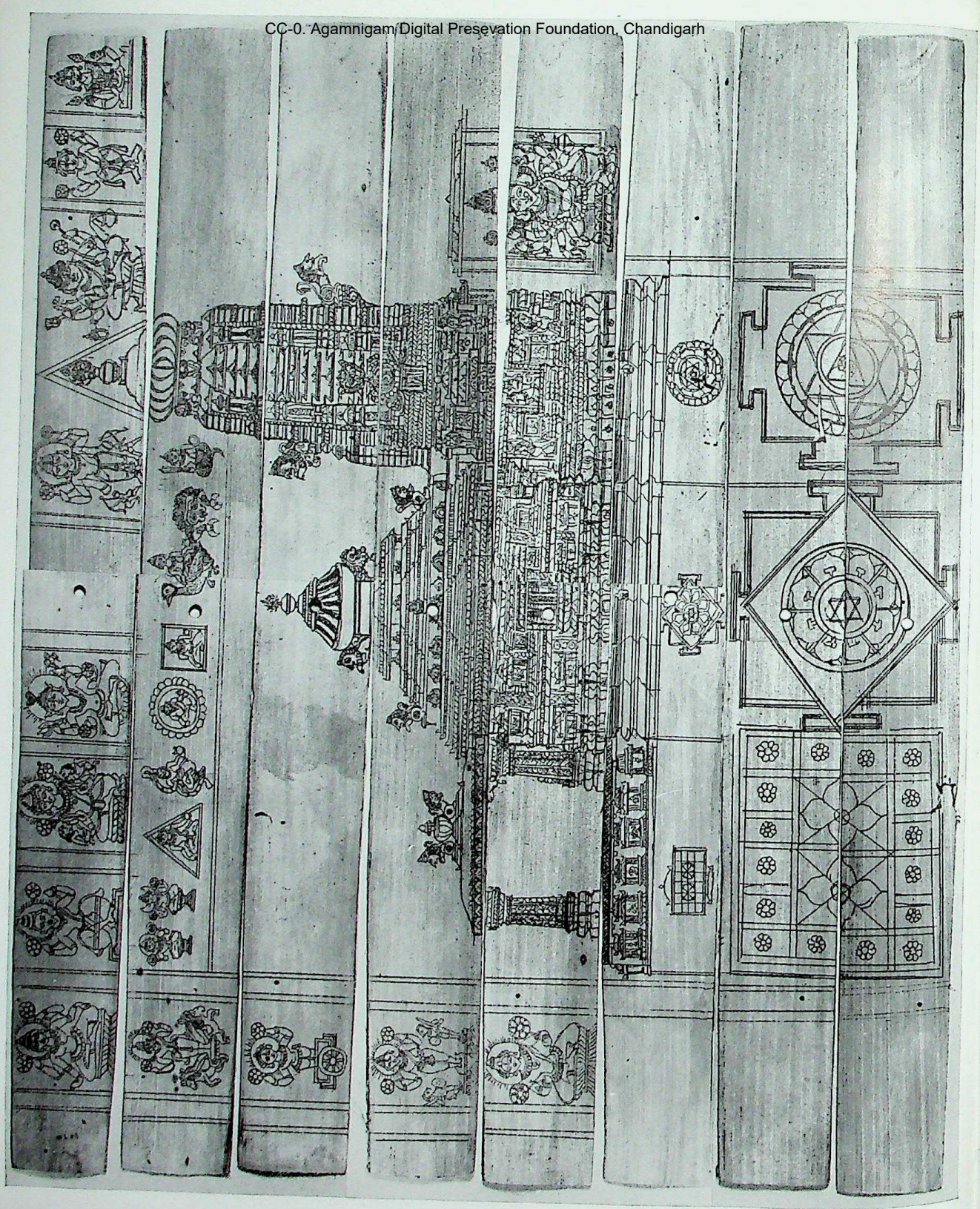

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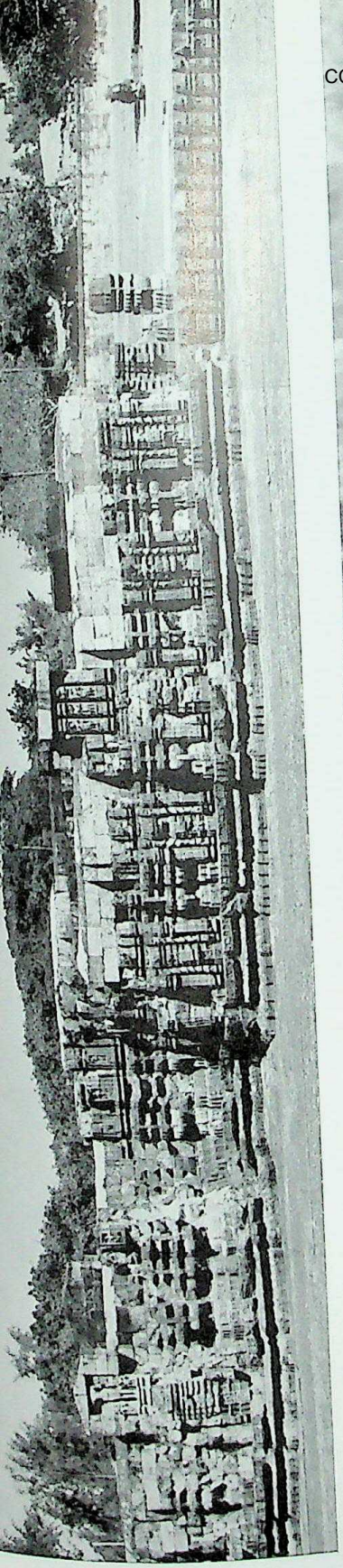

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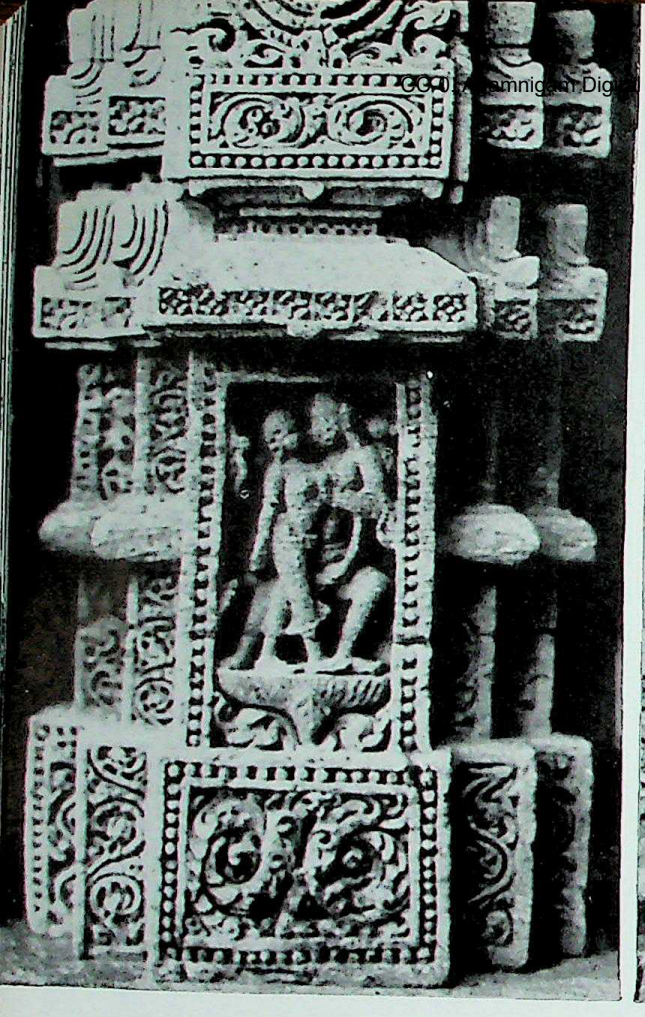

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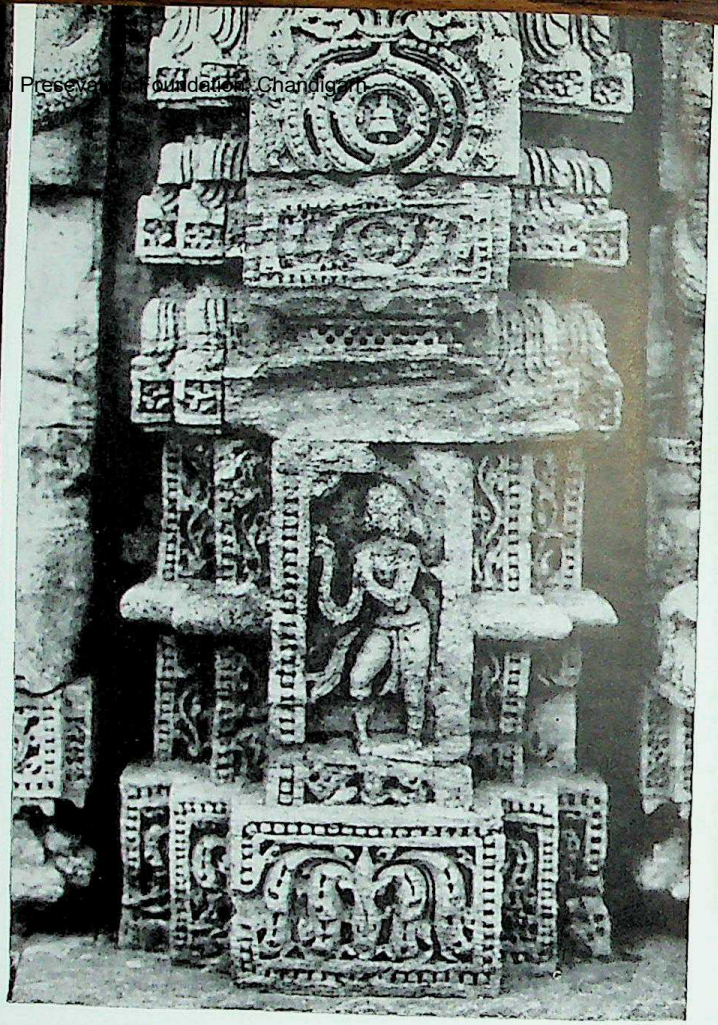

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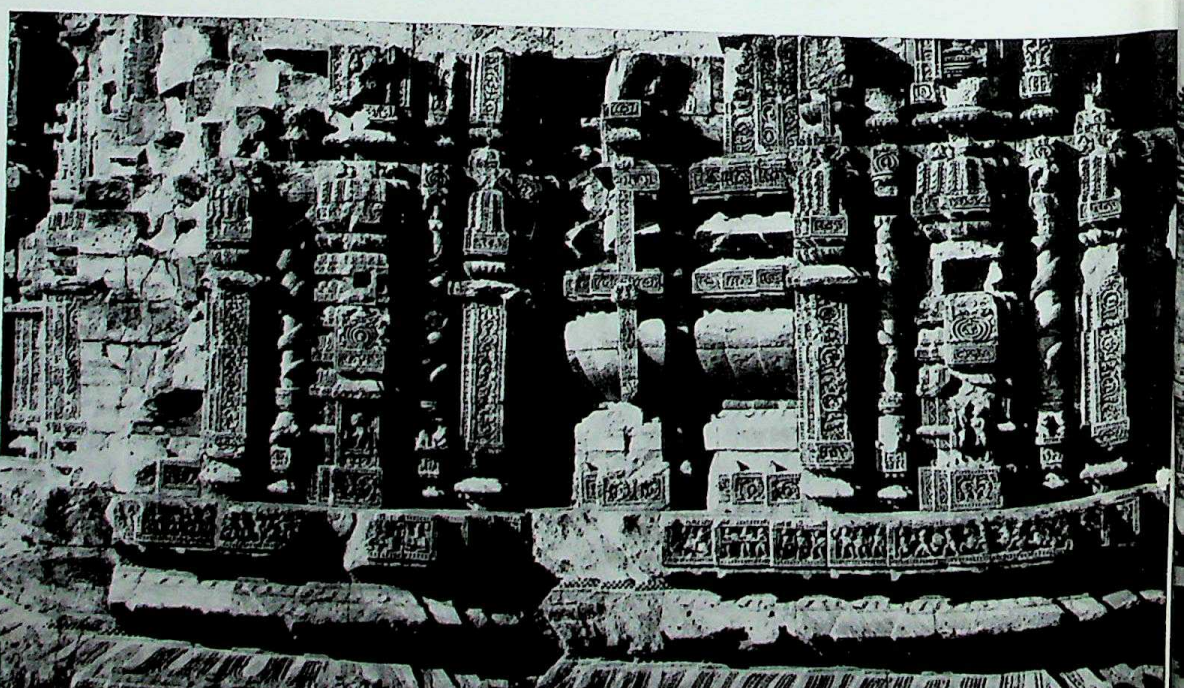

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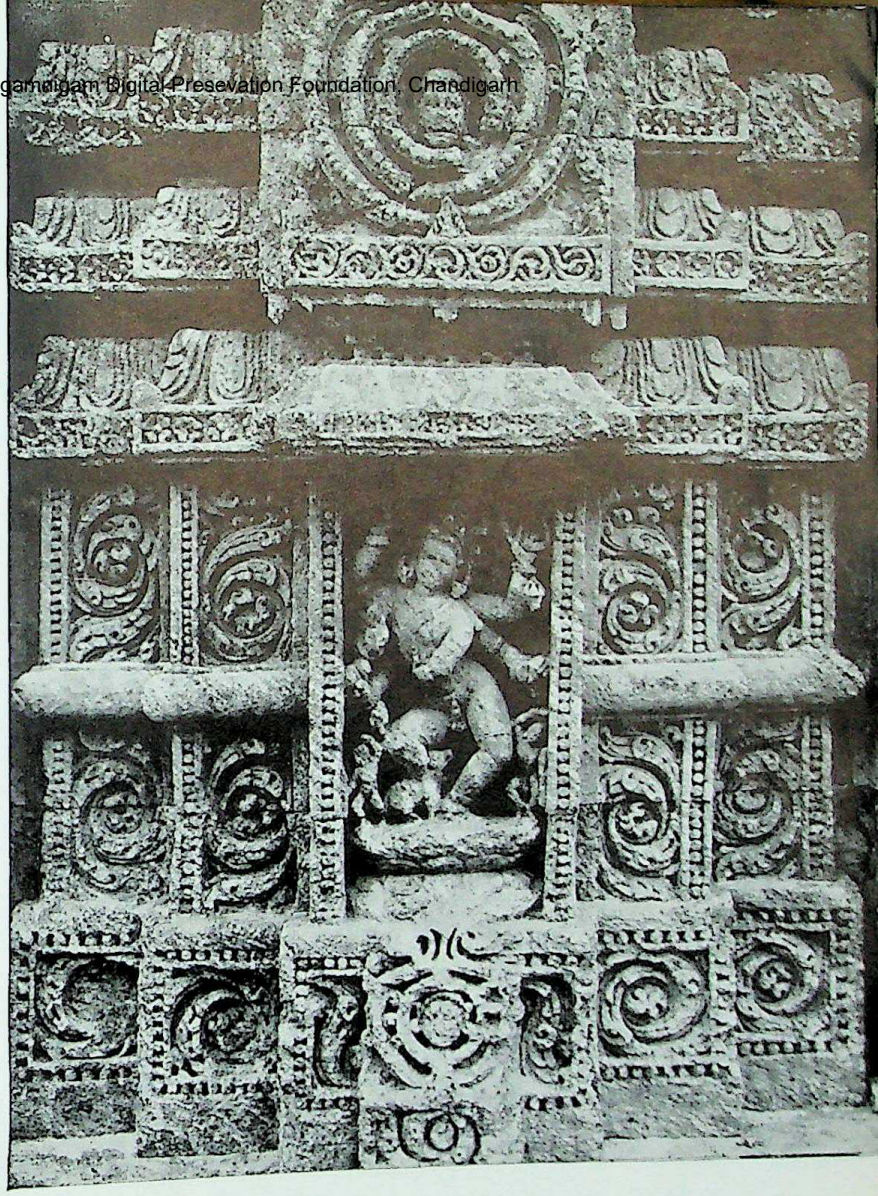

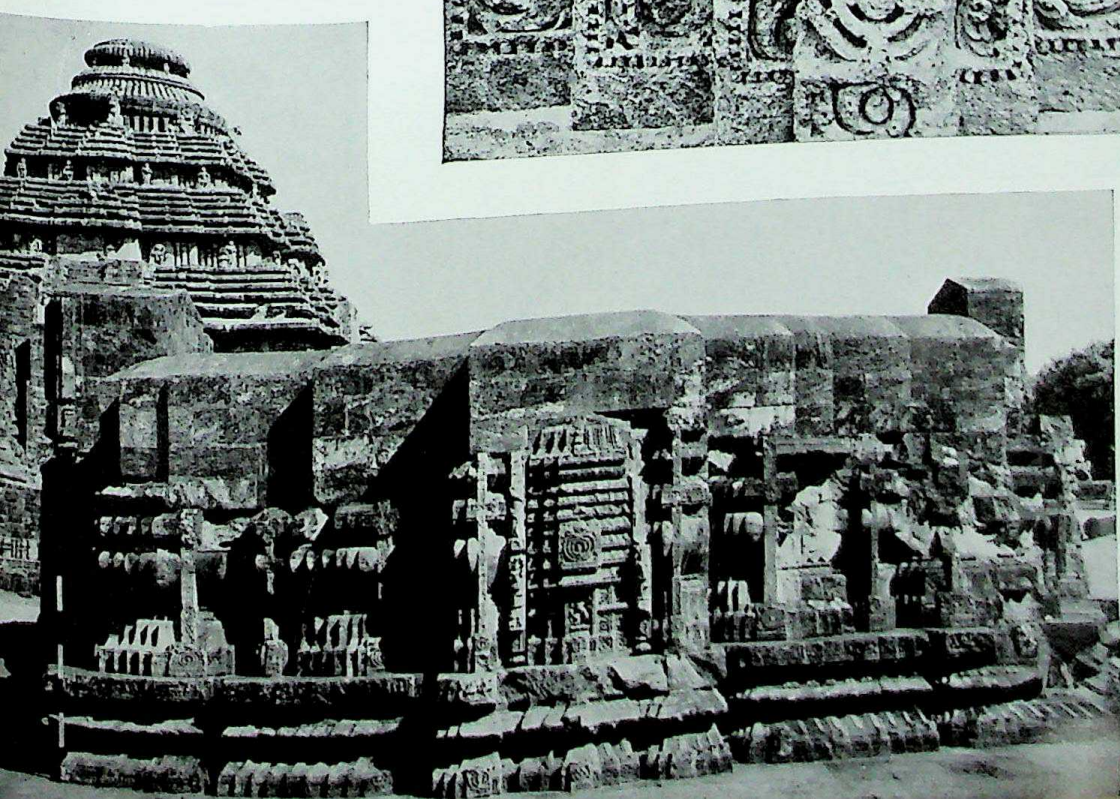

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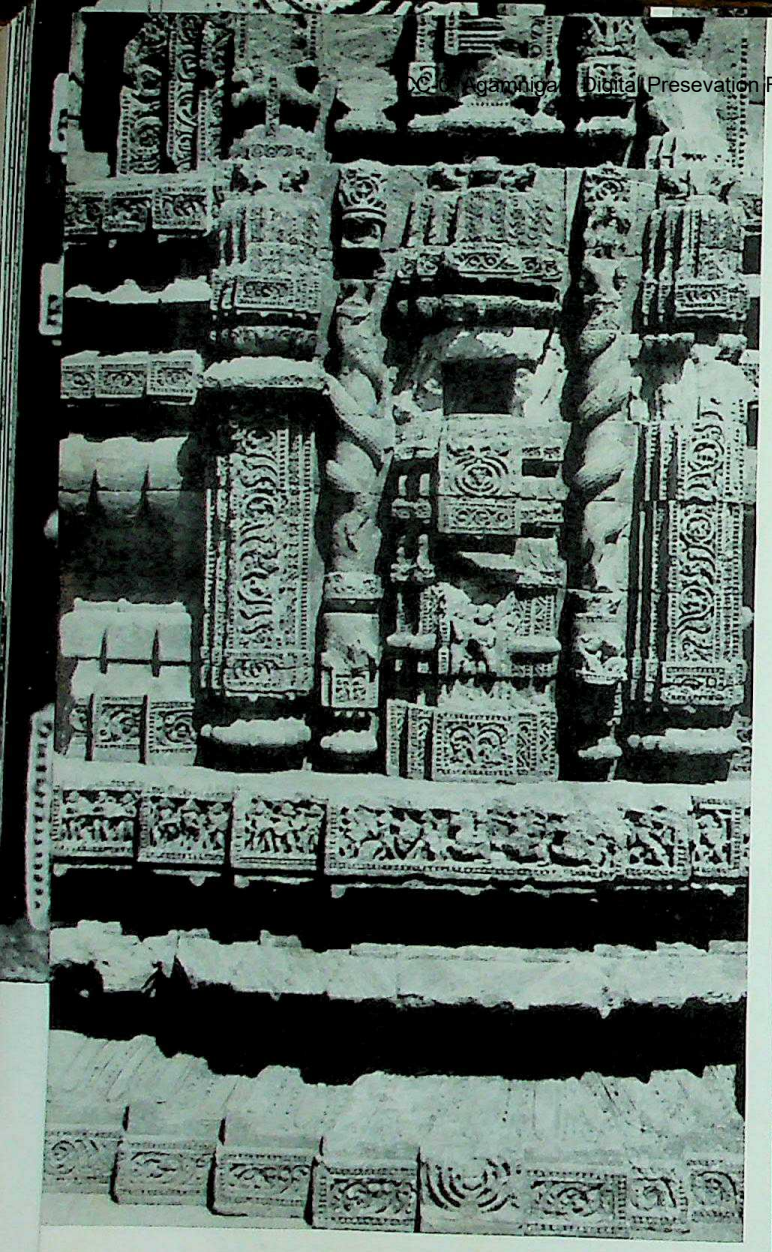
CC-0. Jangamwadi Math Collection. Digitized by eGangotri



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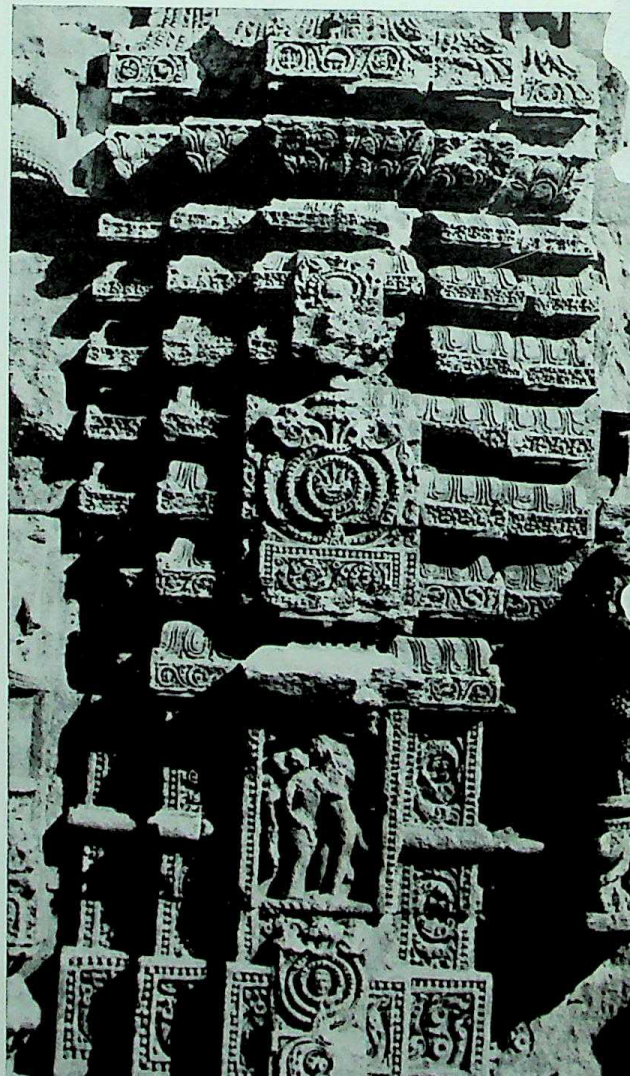

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PL.103

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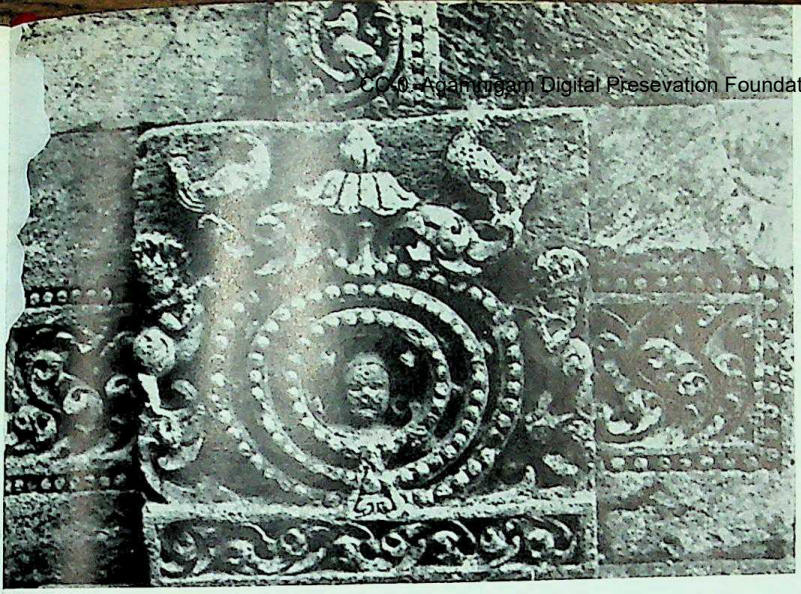

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CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

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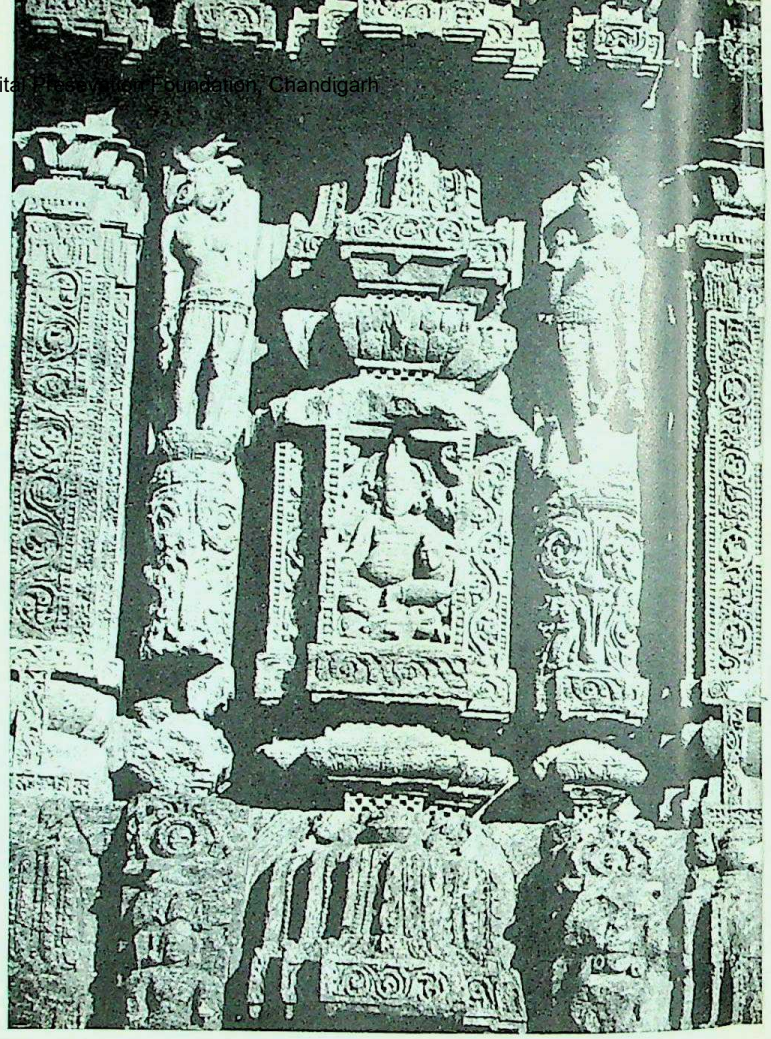

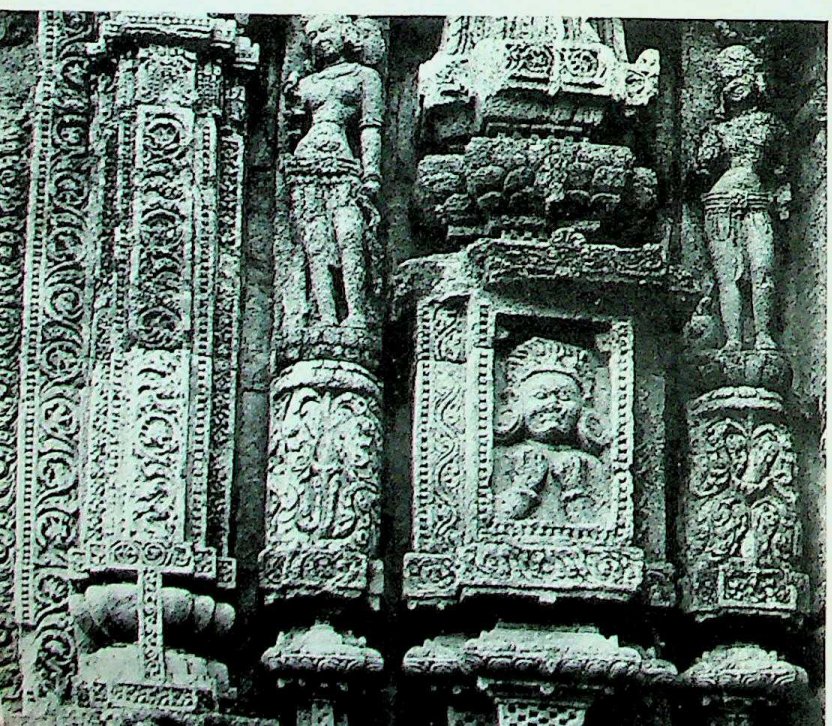

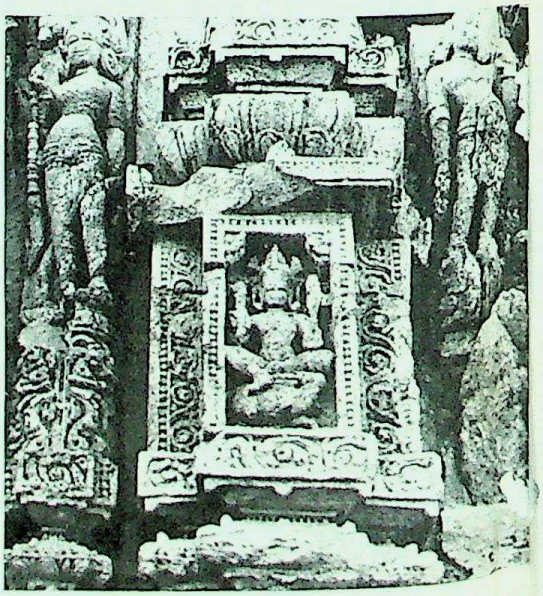

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PL.105

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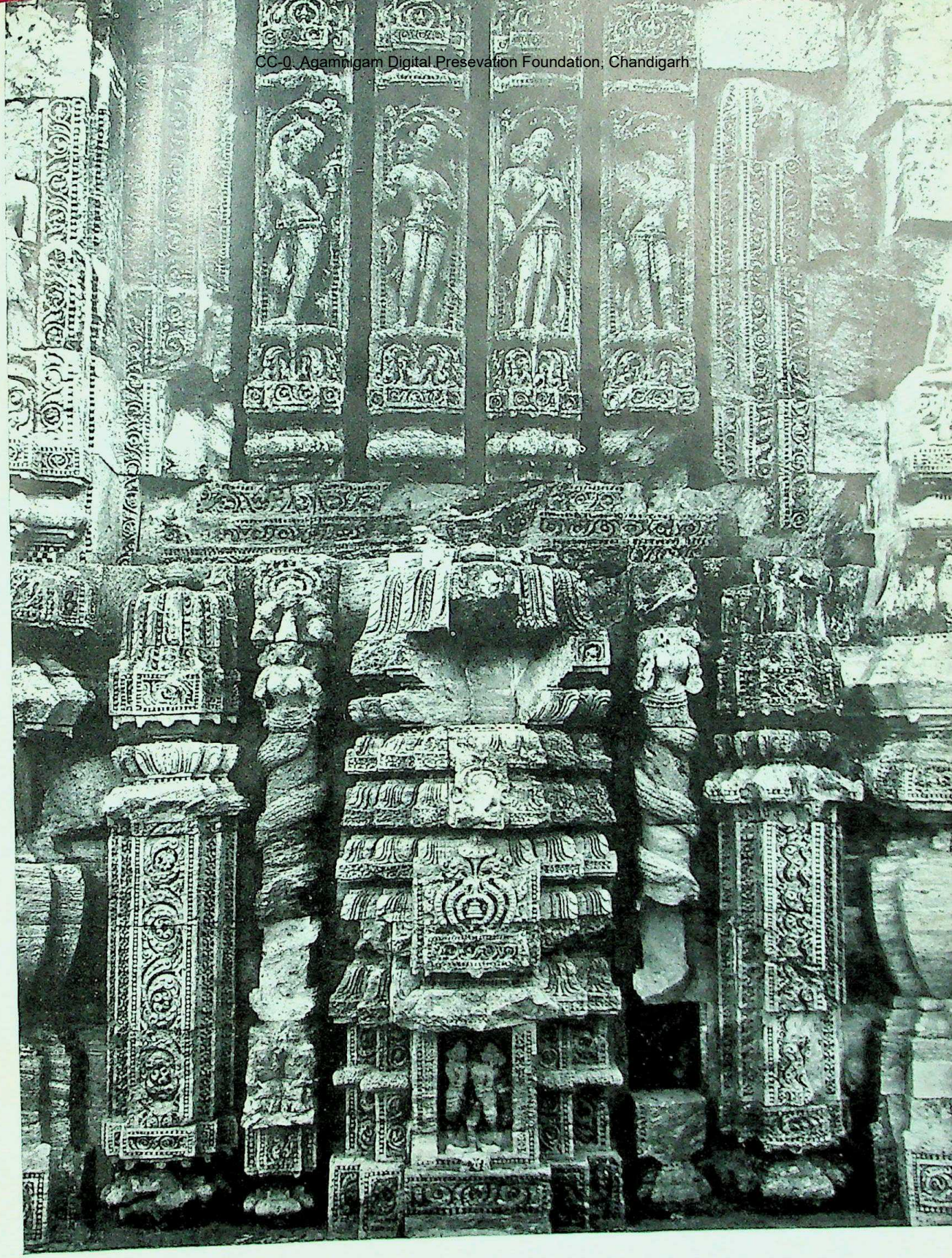

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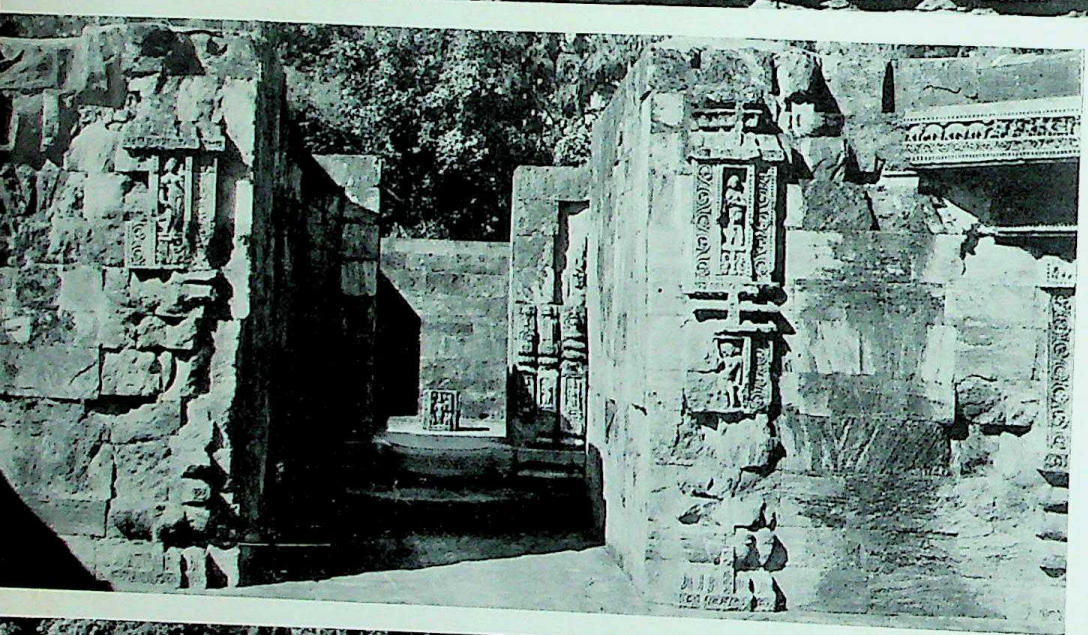

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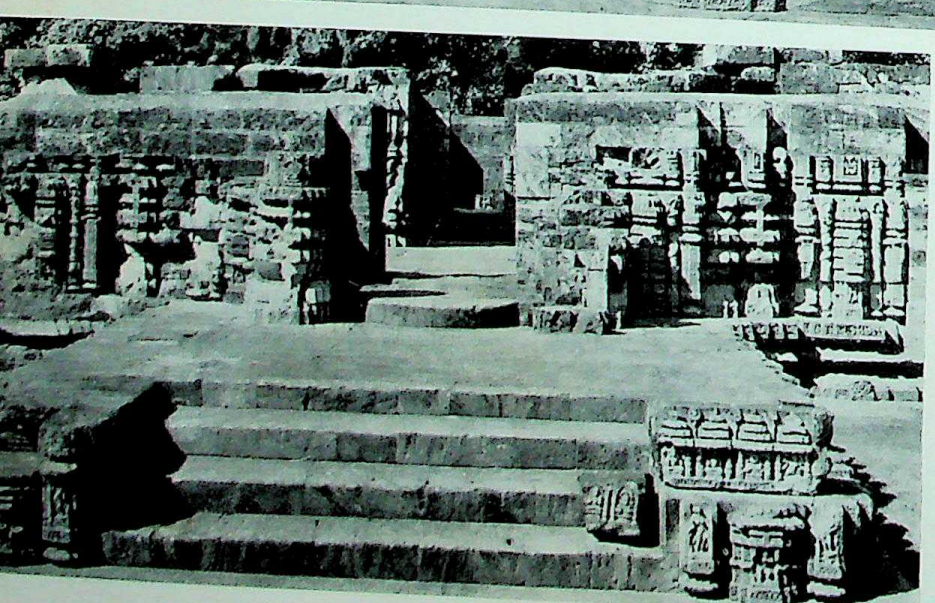

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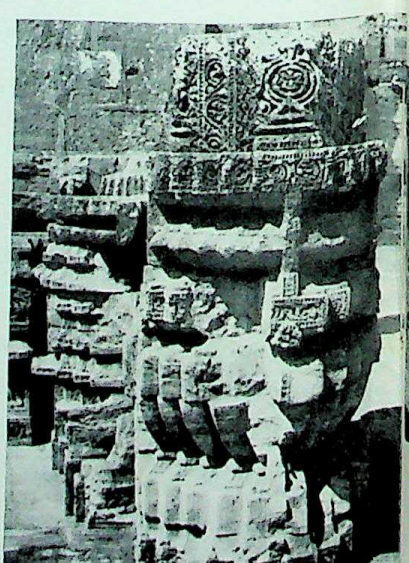

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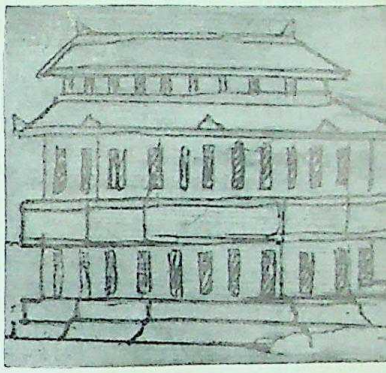

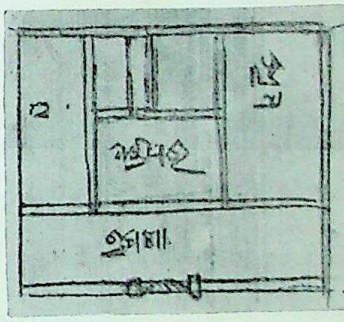

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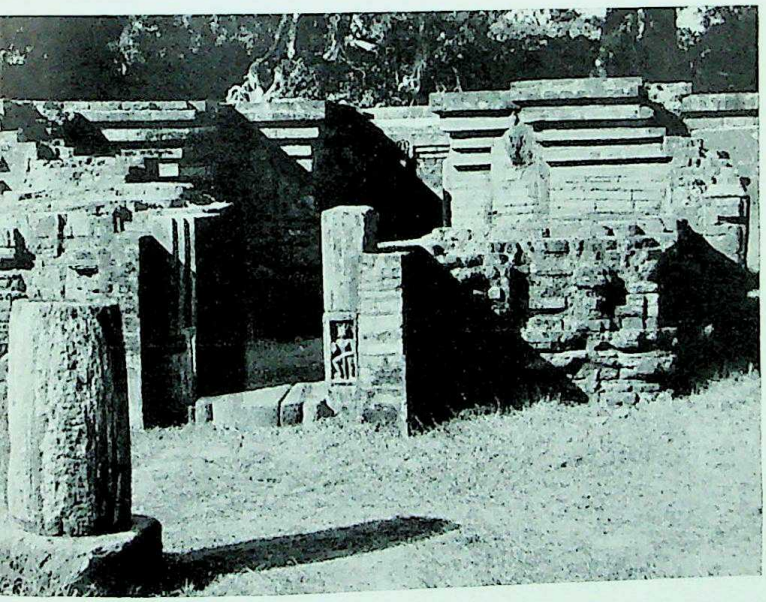

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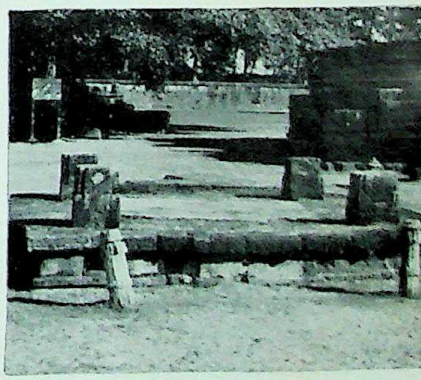

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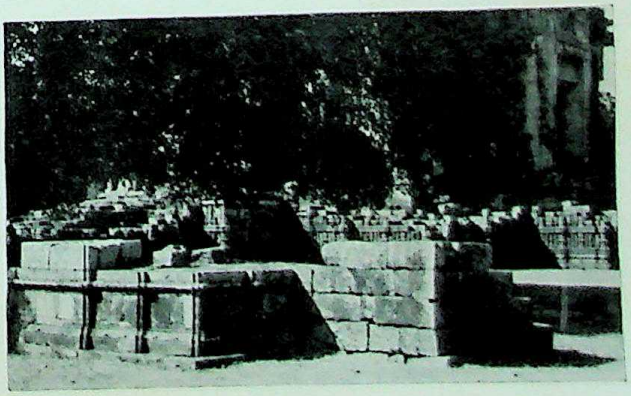

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CC-0. Agamnigam Digital Preservation Foundation, Chandigarh

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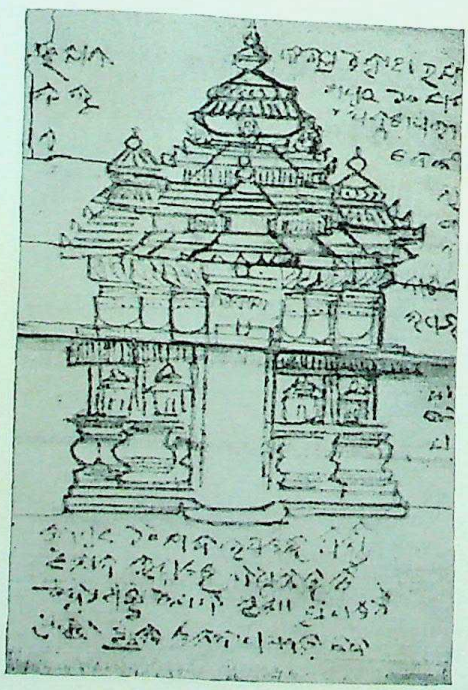

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PL.109

CC-0. Agamnigam Digital Presevation Foundation, Chandigarh

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